

# mm iR

MILITARY MINIATURES in REVIEW

no. 56



Painting Guide Special:  
Weathering Die-Cast

# Halftrack Attack!

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SHORT TAKES • MINI MEN • COOL STUFF GALORE

## CONTENTS

<b>An "In Detail" preview .....</b>	<b>24</b>
<i>The AFV Club leichte Zugkraftwagen 3t (Sd.Kfz. 11/1 late).</i>	
<b>Smokin' haulin' rocketwagen .....</b>	<b>30</b>
<i>The AFV Club leichte Nebelkraftwagen 3t (Sd.Kfz. 11/4).</i>	
<b>Uhu, where are you? .....</b>	<b>40</b>
<i>The AFV Club mittlere SPW Gerät 920 "Uhu" (Sd.Kfz. 251/20).</i>	
<b>Luftwaffe Lowrider .....</b>	<b>46</b>
<i>The AFV Club mittlere SPW (2cm) Gerät 917 (Sd.Kfz. 251/17).</i>	
<b>Strictly French propelled .....</b>	<b>52</b>
<i>The Des Kits 8cm R-Vielfachwerfer auf m gep (Zgkw S303 (f)).</i>	
<b>Saurer Grapes .....</b>	<b>58</b>
<i>The Eagle CZ Saurer RK-7, Sdkfz 254 (Mittlerer Gepanzelter Beobachtungskraftwagen).</i>	
<b>Die-Cast Weathering 10 .....</b>	<b>70</b>
<i>Painting Guide Special: an intro to the world of refinishing prebuilt die-cast models.</i>	

## Features

<b>Short Takes .....</b>	<b>8</b>
<i>Our look at all the latest dope from around the world.</i>	

<b>Mini-Men .....</b>	<b>68</b>
<i>The usual peek at what's new on the figure front.</i>	



## ON THE COVER:

No baby aspirin here—within our Halftrack Attack is Hugo Luyten's wonderful Luftwaffe Flak 251/17. It's the AFV Club kit, paired with the Tristar 20mm FlaK38. The basic kit got a few bits and pieces, the weapon got a turned brass barrel and it is shod with a set of Friul ATL-07. Sprinkle in a smashing finish and polish it off with two Dragon figures and you've got a recipe for cool. Nobody quite renders dark grey like our pal Hugo!



Page 24



Page 30



Page 40



Page 52



Page 70



## From Your Editor

they released a Minenraumer. What really got my attention was their announcement of the Merkava Mk.3D Early. This is being produced in cooperation with well-known IDF armor expert Michael Mass. I wonder who approached whom? Either way, it certainly means they are serious about their future. I find this kind of dialog very encouraging, as it indicates a real concern about the marketplace. I think it's a common fantasy that model companies will take all of our advice and suggestions literally. As I mentioned last time, it's only matter of time before they do, simply by statistical default.

Dragon capped off Nuremberg with the announcement of an 8.8cm Pak 43 Waffenträger. I was a tad disappointed with this. Not that they won't do a good job, but I still hate to see the duplication of effort. I suppose there is business logic to this. With this item in their line, distributors will be more likely to add it to their lengthy DML order list. An interesting concept, but I still stick to my immature reaction (WAH!). I find it fascinating that Dragon always announces several kits right after Nuremberg. There are three so far, as I write this, although I guess the longer they wait, the more likely other new announcements will be considered "pre-Shizuoka."

Speculation always runs rampant this time of year over what Tamiya will announce for Shizuoka, although it's anyone's guess. Predicting what Mr. Tamiya's next move will be is as complicated as picking horses. It's always hard to separate what I wish they would do with what they are mostly likely to do. I thought the Enigma was a rather clever way of exploiting their excellent T-55 tooling. I'd certainly go for something else along those lines, such as a Czech version, or another "conversion in a box." Tamiya appears to be enamored of using at least a small portion of a previous kit within a new release. This obviously reduces the financial risk. I wonder if Mr. Tamiya ever thinks about the GMC 2.5-ton truck? There are several variants that would be possible to render with no more than one sprue. After all, a whole cottage industry exists for these in resin.

I read something very interesting online about AFV Club. It turns out that their stock numbers have included a numerical link to their subject matter for some time now. Paweł "Vodník" Krupowicz noticed that their M42 kit had the product number AF35042 and that it had been reserved for several years. Furthermore, the recently announced M109 kit is AF35109. To continue the intrigue, the AFV Club web site shows AF35048 as a "design in progress." AF35060 is also shown the same way. Not convinced? Consider the following: AF35231, Sd.Kfz.231; AF35232, Sd.Kfz.232; AF35126, M1126 Stryker; AF35128, M1128 Stryker; AF35132, M1132 Stryker; AF35088 88mm Flak 18 and AF35141, M41 HMC. If that ain't a pattern, then I don't know what is. Think about an M48 and M60 from AFV Club—WOW!

### MMiRness

We have a ton of interesting stuff in the article hopper. There is the inevitable kit catch-up, with boatloads of plastic coming down the pike. With all of the stuff released in the last few years and all of the kits coming out each month, it's nearly impossible to truly catch up. Even if we were monthly, it would be unlikely. There is always concern around here about relevancy. This was barely possible when we were quarterly, but it has become less so now that we have switched to bi-monthly. However, I would rather have a more complete feature on a new product, as opposed to rushing out a particular kit in order to appear timelier. We have been working quite hard at getting a big backlog of plastic. There are several finished, but unpainted kits sitting on the shelf behind me and we are adding to that pile each week.

I have even been taking stuff home and putting with it after dinner. The Panda M-ATV MRAP has been occupying a corner of the family room for a few weeks now. To be truthful, a lot of it is just too tempting to resist. I have sneaked a few other items home, too, but don't tell Jeff and Brian...

As far as other material goes, we have a few very interesting things in the can. These are slightly offbeat and different, but I think they will make sound additions to our editorial structure. Stay tuned...

### Welcome to Issue 56

We've got a bit of a halftrack theme going on here. The nucleus of this material was to be a halftrack special issue, but I decided to back it off slightly and offer what I considered to be the most interesting material. After waxing on about the dearth of building articles in Issue 54, I must admit that this selection includes some of our most prolific painters. I just can't resist reading about Hugo Luyten's wonderful filters. There is something very pleasing about his finishes. Mike Rinaldi creates his own brand of magic by making little masterpieces out of what are essentially toys. On the other hand, we got Rick Lawler to fall in love with the construction of Des Kits and we also present a small sliver of Mario Eens' beautiful build of the SdKfz. 11 halftrack—and it's a build article only—no paint. Dig in!

—Pat Stansell

### Blah, blah, blah—and of course: blah

In my last editorial, I spoke briefly about the many new kit manufacturers flowing into the marketplace. One that I missed is the Chinese company Meng. Their debut kit was the Hi-Lux pick-up, which overwhelmed me slightly, so I didn't really pay much attention to them. However, they warmed a little when

[www.ampersandpubco.com](http://www.ampersandpubco.com)



I still whip my hair back and forth

PAT STANSELL

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# Short Takes

what's new, anyway?

## Academy

Academy showed up to the Nuremberg Toy Show and dropped a WWII German subject down on the table: 13230, Jagdpanzer 38(t) Hetzer Late Production Version, TBA. We were a bit surprised by this given their penchant for releasing modern subjects. A closer look is in order, for sure.

Website: [www.academy.co.kr](http://www.academy.co.kr)



## Airfix

Whoa! Did someone mention Airfix? Really? For many years now this giant of the hobby has left tank geeks out in the cold with only a smattering of aging 1:76 scale kits available from them. Things have changed, ladies.

Airfix has recently announced a small lineup of 1:48 scale items that should get at least some of you to pay attention. The subjects are all modern British like the Land Rover, Coyote and the Jackal. They even plan on some figures and photo-etch accessory sets. Here's the release list so far for 2012: A03701, British Patrol Troops (Afghanistan), \$9.99; A03702, British Vehicle Crew \$9.99; A50121, British Forces- Land



Rover Patrol Gift Set, \$24.99; A50122, British Forces- Helicopter Support Gift Set, \$39.99; A50123, British Forces- Patrol and Support Group, \$49.99;

A05301, Supacat MWMK "Jackal" \$15.99; A06301, British Forces Land Rover Twin Pack, \$18.99; A06302, Coyote \$18.99; A65001, Land Rover Photo-Etched Parts, TBA; A65002, Jackal and Coyote Photo-Etched Parts, TBA; A75009, Afghan Single Storey Dwelling, \$29.99 and A75010, Afghan Single Storey House, \$29.99. We're pretty anxious to take a closer look at the Jackal or the Coyote and will fill you in when we know more.

Websites: [www.airfix-usa.com](http://www.airfix-usa.com) and [www.airfix.com](http://www.airfix.com)

## AC Models

Andrew Cairns gets back to his Kiwi roots with the soon to be released ACM35003, NZ Sherman Crew Italy WW2, TBA. The set includes four armor crewman wearing British uniforms. A large chunk of stowage and a modified rear turret bin are also included. This set is perfect for your British/Commonwealth Sherman set in the Mediterranean.

Website: [www.acmodels.co.nz](http://www.acmodels.co.nz)



## AK Interactive

AK Interactive filled us in on some really good news. They recently announced a range of headlight lenses, AK200-228 Lenses, \$7.45 each.



There are a variety of sizes available from one to four millimeters and a number of colors including white, red, amber, and optic (for modern devices). This is really good news considering how hard it is to find the old sets from Grief and MV Lenses these days.

Another little item that may come in handy for a variety of applications is AK 229, Tow Chains, Rusted, \$6.95.

We also saw on their website that they will be releasing an instructional DVD on working with photo-etch brass, but our contact at AK was very tight-lipped even when exposed to sleep deprivation and water boarding.

Websites: [www.ak-interactive-usa.com](http://www.ak-interactive-usa.com) and [www.ak-interactive.com](http://www.ak-interactive.com)

### Alpine

Alpine's latest additions are 35133, SS Panzer Crew Kursk #1, \$18.00 and 35134, SS Panzer Crew Kursk #2, \$18.00. These two tankers are loading Panzer IV ammo wearing the one-piece SS camouflage pattern coverall. They come in a set as 35135, SS Panzer Crew Kursk Set (2 figures), \$34.00.

Website: [www.alpineminiatures.com](http://www.alpineminiatures.com)



### Black Dog

OK folks, let's talk about wedgies. No, not the horrid kind the bullies used to give you on the playground... the vignette kind. You know, like the ones you stick your favorite figures on so they have a setting.

Black Dog has issued a bumper crop with various themes. Each kit contains just a few pieces, so you'll be ready to paint in a jiffy. Check it out: Destroyed Pz.Kpfw. II Base, €22.00; D35009, Destroyed M1A1 Abrams Base, €27.00; D35010,



they seem to have switched their focus away from the 1:48 scale offerings to 1:35 scale. Here's the 1:35 scale list: T35058, Mercedes Wolf Afghanistan Accessories Set, €23.50; T35059, British Humber Mk IV Accessories Set (Bronco), €17.60; T35060, US M-26 Pershing Accessories Set (Hobby Boss), €18.50 and T35061, Dingo Mk III Scout Car Accessories Set (Mini Art), €17.60.

We saw just one 1:48 scale set that was new: T48060, British Staghound Mk III Accessories Set (Bronco), €17.60.

Website: [www.blackdog.cz](http://www.blackdog.cz)

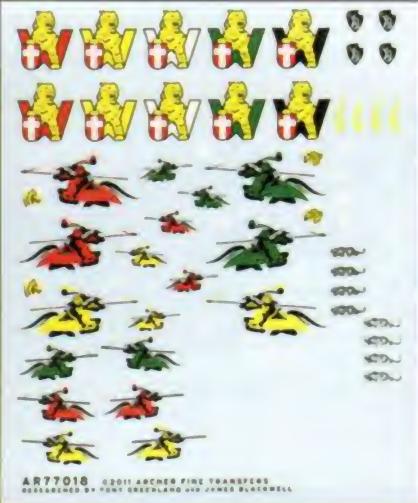


### Archer

Archer's latest batch of goodies are all water-slide decals: AR77018, Tiger Battalion Insignias, \$7.95; AR77019, U.S. D-Day Shipping Stencils for Halftracks, GMC's and Armor Other Than Shermans, \$6.95; AR77020 U.S. D-Day Shipping Stencils for Shermans \$6.95 and AR77021 U.S. late WWII Address codes, Miscellaneous Stencils and Hull Stencils for Lend-Lease Shermans in Russian Service, \$6.95.

The Archer website now has a series of instructional videos on it. You can find these by hitting any of the buttons on the home page and then hitting the Application Instructions button on the next page that appears.

Website: [www.archertransfers.com](http://www.archertransfers.com)



### Aurora Model

The folks at Aurora model are always there to insure that your 1:35 tanker ladies don't get lonely by making a variety of white metal female figures. We stopped by their website and found that they have turned out a new bevy of battle babes since the last time we talked about them in NMHR 72.

Our favorites in this new crop were 041, U.S. Navy Rescue Party "Operation Tomodachi," \$20.00 and 042, Rescued Victim "Operation Tomodachi," \$15.00. Operation Tomodachi (Operation Friends) was the U.S. Armed Forces relief effort following the 2011 earthquake/ tsunami disaster in Japan. The other standouts for us were two civilian figures: 047,

Mode Girls 1930's, \$20.00 and 048, Mode Girls 1930's Ver.2, \$20.00.

The other figures all had a WWII theme, more or less: 037, WWII Russian Red Army Medical Corps, \$20.00; 038, WWII Russian Red Army Nurses, \$20.00; 039, U.S. Army Nurse Corps, \$20.00; 040, U.S. Army Nurse Corps Ver.2, \$20.00; 043, Japanese Army Tank Crew, \$20.00; 044, WWII German Army Soldier 1947 Ver.4 "Elise," \$20.00; 045, WWII German Army Soldier 1947 Ver.5, \$20.00 and 046, WWII German Army Soldier 1947 Ver.6, \$20.00. Some of the guys at the office thought the last three figures were a little weird, but to each his own.

Website: <http://aurora-model.jp>



### The Bodí

While we are on the subject of figures, let's get reacquainted with what's going on with the Hungarian company, The Bodí. It's quite a haul this time around.

On the Soviet WWII side of things, there is 35022, Russian Jeep Driver, \$17.10; 35023, Soviet General, \$17.10 and 35024, Soviet Political Officer, \$17.10 that all come together as 35025, Soviet Jeep Crew, \$49.30. They also put out some Russki heads: 35026, Soviet Heads (5), \$14.00.

Since it's a Hungarian company, you gotta expect some players from the home team: 35032, Hungarian Motorized Artillery NCO, \$17.10 and 35033, Hungarian Motorized Artillery Officer, \$17.10 are a set with 35034, Hungarian Motorized Artillery Officer & NCO, \$32.90 while 35039, Hungarian Panzer Crew, \$17.10 is a nice stand-alone figure.

Rounding things out are a civilian 35035, Natasha, \$15.50 and an interesting conversion: 35047, CV3/35 Ansaldo Conversion Set for Bronco kit #1, \$18.10. There are more goodies on the horizon from The Bodí, so stay tuned.



Website: [www.thebodi.hu](http://www.thebodi.hu)

### Bravo 6

Bravo 6 has three new figures that should be hitting the shelves very soon. 35022, US Army Sniper Team Vietnam is a two figure set of sharp shooting grunts. 35038, USMC (10) Bro's Shoulder Tet '68 is a continuation of the excellent Vietnam



U.S. Marine series. 35043, MACV-SOG (1) is an interesting coming attraction as it appears to include one U.S. Special Forces soldier and one Vietnamese. With luck, these will be

in Mini Men in a future near you.

Website: <http://bravo6.diorama.ru>

### DEF Model

DEF Model is all about resin replacement wheels in this update. It's quite a list and even your Mom will find something useful here: DW30002, WW2 German Wagen Continental Wheel Set 2 (Tamiya), \$12.00; DW30003, WW2 German Wagen Wesa Wheel Set 3 (Tamiya), \$12.00; DW30004, Willys MB 4x4 Truck Wheel Set (Tamiya), \$12.00; DW35013, BTR-70 APC Sagged Wheel Set (Zvezda), TBA; DW35017, M1078 US LMTV Truck Sagged Wheel Set (Trumpeter), \$20.00; DW35018, BTR-60 APC Sagged Wheel Set (Trumpeter), TBA; DW35019,



Website: <http://defmodel.com/>

### DES Kit

We are doing a little catch-up with Des Kits. In the past two years, they have released a few half-tracks that are simply breathtaking. We talked about the Somua half-track kits back in MMIR 53, one of which is featured in this very issue by our amigo, Rick Lawler. In fact, the launcher for the German modified Somua is now available as a separate item: 35127, 8-cm Raketenwerfer (1943/45). This is kinda cool since these launchers were also used on the armored Maultier chassis (think Italeri).

35126, Schneider/Kegresse P16 Reconnaissance Half-Track is a rather unique vehicle that Pat got a sneak peek at back in



### CMK

In the recent past we have seen some rather nifty interior sets made specifically for Tamiya's older but still nice German 1:35 armor. CMK has now joined the 21st century and is focusing on some of Dragon's tastiest offerings in the past few years: 3133, Pz.III Ausf. E/F/J/L/N Engine set (Dragon), \$29.50; 3134, StuG. III Ausf.G Driver's Set (Dragon), \$31.00; 3135, StuG. III Ausf.G Engine Set (Dragon), \$31.00; 3136, Panther Ausf.G Engine Set (Dragon), \$31.00 and 3137, Panther Ausf.G Driver's Set (Dragon), \$38.50. They also did a set for the Huey: 6006, 1:35 UH-1D Cargo Bay Set (Dragon), \$31.00.



CMK seems to really like producing figures too because they have been doing a lot of that: F35225, Soviet Soldier with Machine Gun (1 fig.), \$17.50; F72226, German tank crew 1944 (5 half body figures), \$14.50 and F72227, German Tank Crew 1944 (3 standing figures), \$14.50.

As far as full kits go, let's talk about cranes. They have two kits out: RA050, 1:35 Steam Crane, \$136.50 and 8042, 1:48 Steam Crane Germany, pre WWI - post WWII, \$80.50. These look really cool. From a glimpse at the instruction sheets they seem pretty easy to assemble too.

Website: [www.cmkkits.com](http://www.cmkkits.com)

2010 during Euro Militaire. To the best of our knowledge, this is the first kit of this vehicle in 1:35 scale. They also released a little accessory kit for the Tamiya Citroen: 35124, Interior and Exterior Detail Set for Citroen 11 (Tamiya).

The good news doesn't stop there. Nosireebob. The really big scoop from Des

is a new haul of 120mm figures: 12017-F, 116th Regiment, 29th Division June 6, 1944, €35.00; 12018-F, Fallschirmjager Bust Italy 1944, €18.00; 12019-F, HJ Division Officer Normandy 1944, €35.00; 12020-F, Fallschirmjager Bust with MP40, €18.00, €18.00 and 12021-F, 101st Airborne Division Market Garden 1944, €35.00.

Website: <http://deskit.online.fr>





### Dragon

The Big D had some nice stuff at the Nuremberg Show, some of which we already mentioned in MMIR 55. They displayed multiple new figure sets, but the only one we haven't mentioned to you so far was 6694, Defense of the Reich, \$14.95. We guess that Dragon and Trumpeter are going head to head once again, this time over the Waffenträger. Trumpeter struck first, but now Dragon has a version: 6728, 8.8cm Pak 43 Waffenträger, TBA. There was also yet another T-34 variant on display with 6584, T-34/76 Mod. 1943 w/ Commander Cupola (No. 112 Factory), \$14.95. Since Dragon has a 25 pdr field gun and a Priest kit, they have decided to do the Sexton (6760, Sexton II 25pdr SP Tracked, TBA)

much to everyone's delight. The good folks at Dragon USA also gave us a briefing on another jeep variant, 6714, Armored 1/4ton 4x4 Truck w/.50cal Machine Gun, \$13.95, and another 2cm Flak Gun, 6546, 2cm Flak 38 Late Production mit Sd.Ah.51, \$25.95.

The Black Knight theme continues with their re-boxed King Tiger, CY6042, Kingtiger Benesch Turret, "Black Knight" Series #5, \$49.95.

Some really nice 1/72 scale kits are now on the way too: 7429, Sd.Kfz.232 Schwerer Panzerspähwagen (FÜ) \$19.95; 7436, Neubau-Fahrzeug Nr.1, \$19.95 and 7396, British Churchill Mk. III \$17.95.

Websites: [www.dragon-models.com](http://www.dragon-models.com) and [www.dragonusonline.com](http://www.dragonusonline.com)

### Eduard

Eduard has been concentrating a lot on aircraft subjects lately. Their line of styrene airplane kits has been growing steadily but that does not mean they have abandoned us armor guys and gals altogether.

Their latest super set is for the magnificent Trumpeter locomotive: BIG3573, BR 86 (Trumpeter) \$105.00.

Their other new sets have a decidedly modern slant to them: 36097, M1134 ATGM Slat Armor



(AFV Club), \$54.95; 36101, M1134 ATGM Slat Armor (AFV Club), \$34.95; 36186, BTR-60P APC (Trumpeter), TBA; 36194, ASU-85 SPG (1956) (Trumpeter), \$32.95; 36199, Canadian AVGP Cougar (Trumpeter), TBA and 36201, BTR-40 APC (Trumpeter), TBA. The only WWII set we saw was 36203, British Light Tank Mark VIB (Vulcan), TBA.

The newest development from Eduard has been their Flora and

### Evolution Miniatures

Just because Evolution got squeezed out of the last two issues does not mean we have stopped loving them. To make things right, we bring you this whopping list that will make your eyes bleed: 35046, U.S. Special Forces Operator (Afghanistan 2001-2003); 35047, U.S. Special Forces Operator (2) (Afghanistan 2001-3); 35048, U.S. Special Forces Operator (3) and Afghan



Man (Afghanistan 2001-2003); 35049, Afghan Man; 35050, Soviet Tankman (1940-1942); 35051, Waffen SS Officer; 35052, Arabic Man; 35053, SS Schwimmwagen Crew, (Kharkov, Winter 1943); 35054, U.S. Special Forces Operators (4) (Afghanistan 2001-2003); 35055, American Marines WW2 Pacific Ocean



(BAR Gunner); 35056, U.S. Marine (Machine Gunner) Set-2 (Vietnam); 35057, U.S. Marine WW2 (Flamethrower), Pacific; 35058, Soviet Tankmen WW2 (1941-1943); 35059, German Tankman WW2 and 35060, Russian Soldiers, Chechen Republic (Mercenaries). That's a load of great figures. You should stop by the website to check them out before you start your next project.

Website: [www.evolutionminiatures.com](http://www.evolutionminiatures.com)

### Echelon

Echelon is still kickin' ass and taking names. They are one of the best companies out there to get aftermarket markings, especially for modern subjects. They also stock mirror sets and reflective coating for modern vision blocks and optical devices.

New decal sets include D356127 British Vickers Light Tank Mk VIB (Pt 2), \$14.50;

D356128, British Vickers Light Tank

Mk VIA & VIB (Pt 3), \$24.50; D356129

3/29 Battery Emblem for AS90, \$5.50

; D356130 Jeeps In North Africa, \$8.50;

D356041, Australian M1A1 AIM Abrams,

\$12.50; P163020 US Army Patches, \$12.50 and P353020

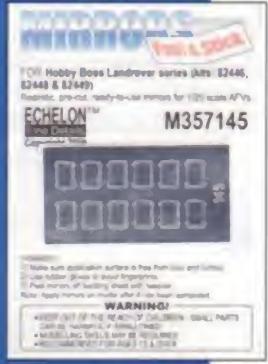
US Army Patches, \$12.50. Another thing

to keep an eye on with Echelon is that they do periodic reprints of their sets that sell out such as D356005, PT BOAT Generic Hull Numbers (reprint), \$9.50.

As far as the optical coatings, reflectors and mirrors go, we saw these new sets: D356035, Orange Reflectors for Modern Swedish AFVs, \$5.50; D356081, CENTAURO Vision Block & Light Treatment, \$9.50; D356083, Red Reflectors for Modern Swedish AFVs, \$5.50; D356093, M113 APC Periscope Surface Inserts - Pink (Academy), \$6.00; M357144, British Light Tank Mk VI Series (Vulcan), \$6.00 and M357145, Landrover Series (Hobby Boss), \$6.00.

There is much more to be seen on their website. We strongly suggest you bookmark it.

Website: <http://pachome1.pacific.net.sg/~kriegsketten>



Fauna sub-line that has several new releases: 36196, Fauna-Birds Colour, \$24.95; 36206, Palm Leaves Washington Filifera, TBA; 36207, Palm Leaves Howea Belmoreana, TBA and 36210 Palm Leaf Cocos Nucifera, TBA.

Last but not least is a new quick mask set: XT 176 GTK Boxer Windows (Revell Germany), TBA.

Website: [www.eduard.com](http://www.eduard.com)

## Feist Books

Our old buddy Uwe Feist started up his own publishing company a few years back with books that all have a German WWII theme. You can get his titles really easily by contacting RZM imports. **2cm FLAK & 2 cm Flakvierling, \$40.00** is a new title that you

can read more about in the book reviews section. Another title is **Beutepanzer 1939-1945, \$55.00** that is about captured armored from several nations that was pressed

into German service. We'll take a closer look at Beutepanzer in the next issue.

Websites: <http://feistbooks.com> and [www.rzm.com](http://www.rzm.com)



## Friulmodel

Friul is back in the news with tons of tasty white metal tracks. The list shows that they are willing to give some love to both old and new offerings: ATL-108, Russian VOROSHILOVETZ

**PZ III/IV**

**ATL-117**

250 links in 1/35 th scale  
and a wire to obtain the track prints.

**BISON I / II**

**ATL-122**

240 links in 1/35 th scale  
and a wire to obtain the track prints.

Tractor, €22.00; ATL-109, SOVIET 203mm B-4 Howitzer, €18.00; ATL-110, Leichter Zugkraftwagen 1t Demag, €22.00; ATL-111,

PANZERFAHRE (PzF), €27.00; ATL-112, Mitteler Zugkraftwagen 5t (Sd. Kfz. 6-6/2 - DIANA), €22.00; ATL-113, ARCHER Self-Propelled Gun, €27.00; ATL-114, German half-track L 4500R Maultier, €27.00; ATL-115, AMX-30, €27.00; ATL-116 TIGER I Initial Type (Mirror Tracks), €30.00; ATL-117, PZ III / IV, €27.00; ATL-118, Pz.Kpfw.II Ausf. C (VK-601), €27.00; ATL-119, Neubaufahrzeug, €27.00; ATL-120, E-100, €35.00; ATL-121, 12.8cm PAK 44 / Waffenträger Krupp 1, €27.00 and ATL-122, BISON I / II, €27.00. Those are just the 1:35 scale tracks. Quarter scale maniacs will want to stop by the website to check out the 1:48 scale lineup.

Website: [www.friulmodel.hu](http://www.friulmodel.hu)

## Griffon

Griffon Models has been focusing on the wonderful Dragon Jagdpanzer IV kit lately to good effect. As usual, they have several options available in their photo-etch sets so that you can get the level of detail you want for the right price. Here are the big sets: BPL35010, Jagdpanzer IV L/70(V) Early/Middle Production (Royal Edition), \$89.95; L35015, Jagdpanzer IV L/70 (V)



Early/ Middle Production (Premium Edition) (Dragon), \$64.95; L35049, Jagdpanzer IV L/70(V) Early/Middle Production, \$22.95; L35A093 Universal Hull Side Armor Skirts for Jagdpanzer IV L/48 & L/70(V), \$17.95, L35A094, Universal Track Fenders for Jagdpanzer IV L/48 & L/70(V) (Dragon), \$21.95; L35A095 Universal Engine Deck Side Armor Plates for Jagdpanzer IV L/48 & L/70 (V) (Dragon), \$4.95; L35A096, Brass Pre-formed Exhaust Pipe for Pz.Kpfw. Ausf. J, \$12.95 and LB35028, 7.5cm StuK Barrel for Jagdpanzer IV L/70(V) & L/70(A) (Dragon), \$10.95. That's a lot of options for an already great kit, ladies.

They also did some nifty 88mm ammo boxes: L35A031, Wooden Ammo Boxes for 8.8cm KwK 36 Vol.1, \$12.95; L35A032, Wooden Ammo Boxes for

## Formations

Formations is back in business with a new owner. You can still find them at the same web address. This is especially good news for those Shermanites who can't get by without that great onboard tool set. We stopped by the home page to see what was up. The list of re-releases looks like this so far: F011, M4A3 Sponson Fillers with Exhaust Deflector, \$12.00; F018, Pioneer Tools with Bracket and Straps, \$11.00; F020, Pressed Sherman Idler Wheels, \$5.00; F022, Late Low Bustle Sherman Firefly Turret, \$27.00; F041, Pressed Spoked Sherman Wheels w/ Idlers and Spare, \$12.00; F047, VVSS Sherman Track Skids, \$4.00; F048, British Sherman Hull and Turret Stowage Boxes, \$10.00; F052, Sherman Adjustable Idler Wheel Mounts, \$6.00; F059, Plain Dished Sherman Wheels with Idlers and Spare,



\$12.00; F064, Early Low Bustle Sherman Firefly Turret, \$27.00; F094, Direct Vision M4 Sherman Upper Hull, \$30.00; F086, Ride Height Spacers for Tasse Sherman Suspensions, \$3.00; F108, Ride Height Spacers for Tasse M3 Style Suspension, \$3.00; F120, Late Split Hatch Sherman Cupola, \$9.00 and F129, M4 Sherman Small Hatch Composite Conversion, \$45.00

Website: [www.formationsmodels.com](http://www.formationsmodels.com)

8.8cm KwK 36 Vol. 2, \$13.95; L35A033, Wooden Ammo Boxes for 7.5cm KwK 42 StuK 42, \$12.95 and L35A051, Wooden Ammo Boxes for 8.8cm Flak 18, \$15.95. Griffon has their own excellent website ([www.griffonmodel.com](http://www.griffonmodel.com)) that has complete profiles of each product. We'd also like to thank Dragon U.S.A. for the updates (again).

Website: [www.griffonmodel.com](http://www.griffonmodel.com)



## Hauler

Hauler also premiered some new photo etch sets at Nurmeburg.

Let's get caught up, shall we? The 1:35 scale sets are HLU35048, Pz. II Ausf. A/B/C



(Tamiya), €10.08; HLU35049, VW Type 82E Kafer (MPM/ Italeri), €9.60; HLU35050, Staghound Mk.III (Bronco), €10.44 and HLU35051, Soviet Field Kitchen KP-42 (Miniait), €9.18.



In quarter scale there is the following: HLX48320, Panther Additional AA Armor (Tamiya), €11.40; HLX48321, Ford T (RPM), €9.18 and HLX48322, T17E2 AA Staghound (Bronco), €10.44.

Finally, there are two in 1:72 scale: 72012, PE Set of Skies, €6.12 and 72103, Village Set, €6.60.

Website: [www.hauler.cz](http://www.hauler.cz)



## Hussar

Our contact at Air Connection advised us on some upcoming tire sets. We did not see them up for sale yet, but stay tuned. Here they are: HSR



## Hobby Boss

In the past year or so, Hobby Boss become a force in our little niche that is just plain impossible to ignore. The release of the modern U.S. M1070 Tank Transporter (85502, M1070 Truck & Tractor & M1000 Heavy Equipment Transporter Semi-trailer) has blown a lot of people away. Seeing different Land Rover variants in styrene (82446, Defender XD 'Wolf' W.M.I.K., 82448, Defender 110 Hardtop and 82449, RSOV w/MK 19 Grenade Launcher) has also garnered attention from many quarters. They have also done some cool WWII items to such as the White Scout Cars (82451, U.S. M3A1 "White Scout Car" Early Production and 82452, U.S. M3A1 "White Scout Car" Late Production).



Just to get caught up, here are all the other new items we saw on their website: 82444, German VK4502 (P) Vorne; 82445, German VK4502 (P) Hintern; 82459, GMC Bofors

40mm Gun; 82463, ZTZ 96 MBT; 82465, German LWS Early Type; 82466, BJ2022JC YONG-SHI SUV 0.5t; 82472, PLA ZSD89 APC; 82475, Swedish CV90-40C IFV/W Additional All-round Armor; 82480, German Boxer MRV and 85501, 152mm ShKh DANA vz.77.

The fun doesn't end there. We have information on incoming kits from a source we dare not disclose. It includes some really weird stuff we thought would never be done in styrene like 82491, Sd.Kfz. 254 Tracked Armoured Scout Car, 82489, French EBR-10 Wheeled Reconnaissance Vehicle 82489, French EBR-10 Wheeled Reconnaissance Vehicle; 82478, Hungarian Light Tank 38M Toldi; 82467, Dong Feng Meng Shi 1.5 ton Military Light Utility Vehicle- Parade Version and 82483, PLA ZBD-05.

Websites: [www.hobbyboss.com](http://www.hobbyboss.com) and [www.squadron.com](http://www.squadron.com) (U.S. Importer)

## Hornet

There have been unsubstantiated reports of disembodied 1:35 scale heads floating around the internet lately in the form of: HGH 24 Kreigsmarine Heads; HGH, German Army Panzer Crew with Headphones; HBH 15, Heads with British Sidecaps and HH32, Heads with Starved, Emaciated Features. Hornet heads are the best. Go get some today.



Website: [www.greenwichgateway.com/hornetandwolf/](http://www.greenwichgateway.com/hornetandwolf/)



35095, Sd.Kfz. 221 Truck Wheels (Bronco); HSR 35101, GAZ 69 - Civilian Pattern Tires; HSR 35109, GAZ 69 - Burned Down Wheel Rims With Spare Rim; HSR 35114, Long Tom Wheels

Type 1; HSR 35115, Long Tom Wheels Type 2 and HSR 35116, Long Tom Wheels Type 3.

Website: [www.airconnection.on.ca](http://www.airconnection.on.ca)

## IBG Models

On the subject of 1:35 scale cars and trucks, let's talk about the Polish company, IBG. They just don't stop rockin' when it comes to variants of the Büssing-Nag heavy truck. Their two latest versions are 35010, BÜSSING-NAG 500S 4.5ton Heavy Truck Rear-wheel Drive, €34.90 and 35011, BÜSSING-NAG 500A 4.5ton Heavy Truck Four-wheel Drive, €34.90.

These fellows were also at Nuremburg. Their projected list was quite ambitious. Get a load of this: 35012 Büssing-NAG 4500S; 35013 Büssing-NAG 4500A; 35007 Einheitsdiesel with German Small Field Kitchen Hf. 14; 35008 Einheitsdiesel with German Small Field Kitchen Hf. 14; 35006 Einheitsdiesel with Bilstein Recovery Crane; 35015 Bedford QLD General Service Truck; 35009 Breda 37/54 37mm Italian Anti-aircraft Gun; 35016 Bedford QLT; 35017 Bedford QLR; 35018 Bedford QLB and 35019 Chevrolet C15A No. 13 Cab. We'll keep you posted.

Website: [www.ibg.com.pl](http://www.ibg.com.pl)

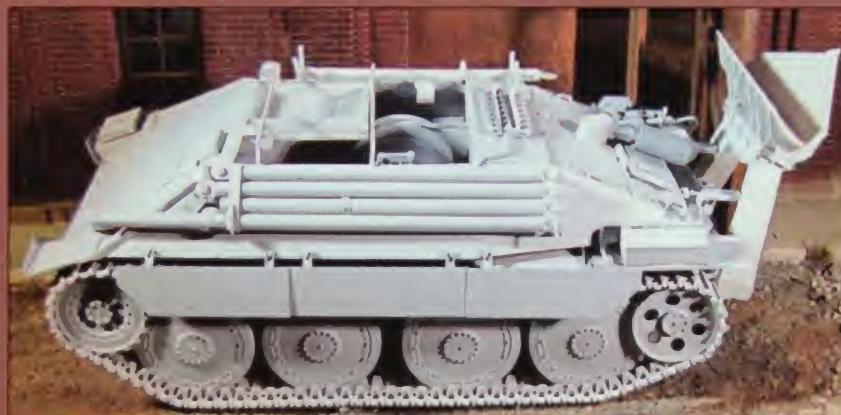


## LZ Models

LZ Models knocked our socks off with their release of a resin 1:35 scale version of the M29 Weasel. We thought that was a gutsy move.

Well, they went ahead and put out the improved version of the Weasel in the form of 35503, American M29C Weasel, €55.00. This version had a float kit on the front and back to improve... flotation.

As if that isn't enough, they went ahead and did two versions of the Berge-hetzer as conversion sets for a Dragon or Tamiya kit: 35401, German Bergepanzer Hetzer Early, €49.99 and 35402, German Bergepanzer Hetzer Late, €54.99. LZ also offers a set of Hetzer wheels: 35403, German Jagd-



## Lead Warrior

Russian resin conversion maestros Lead-warrior have been quiet for a while. They've chosen to end the drought with something appropriately weird and wonderful: LW35210, Magirus Mannschaftstransportwagen, \$233.00. This was a German 8-wheeled armored car designed during the inter-war years. It was essentially a tank on wheels. The program was cancelled because it was considered too expensive. There is a complete rundown on this vehicle on the website.

Leadwarrior is also offering a new conversion: LW35206, Opel Admiral Ambulance with Interior (ICM), \$58.10. We've received samples from these guys in the past and the quality is outstanding. If you've got the resin cojones, definitely give them a shot.

Website: [www.leadwarrior.com](http://www.leadwarrior.com)



## ICM

More soft skins are rolling your way from ICM. The standout from our vantage point will be 35533, Typ 770K (W150) Tourenwagen, WWII German Leader's Car. This was Daimler-Benz's top of the line model that came out in 1938.

We also got wind of some other new kits that weren't showing up on their website yet: 35412, V3000S/8SM (Sd.Kfz.3b) Maultier; 35412, Krupp LHH163 Kb.72 and 35472, Admiral Saloon.

Website: [www.icm.com.mx](http://www.icm.com.mx) and [www.squadron.com](http://www.squadron.com) (U.S. Distributor)



## panzer 38 Hetzer Late Wheels, €9.00.

LZ is also delving into the realm of wheeled vehicles with 35404, CMP Ford F15 Truck, €44.00. CMP stands for Canadian Military Pattern.

During WWII the Canadians manufactured a large number of trucks built to British military specifications and used by the Allies in all fronts, including the Pacific and Lend-Lease to Russia.

LZ Models was originally a railroad oriented company and they have given the Trumpeter BR86 some TLC with several sets. They cover this angle yet again with 35307, BR86 Drive Wheels (Trumpeter), €5.00.

Last but not least is one accessory set: 35504, US Army Reel Equipment, €8.99.

Website: [www.lzmodels.com](http://www.lzmodels.com)

## Kamizukuri

It's all about the laser cut paper with this Japanese company. Recently they started turning out accessory sets that were previously only seen in photo etch brass and we like the results. The two most recent sets are: FP-11, Sd.Kfz.223 Honeycomb Deck Set (Hobby Boss), ¥810 and FP-12, M4 Sherman Light Guard Set, ¥810.

The mainstay for Kamizukuri are their paper plants and they haven't been slouches about that either: A-32, Iron Fence and Gate, ¥950; A-33, Birou, ¥950; A-34, Brush 2, ¥950; A-35, Daisy, ¥950 and A-36, Jungle Plants Three Sets ¥1,710.

Webs i t e s :  
[www.kamizukuri.jp](http://www.kamizukuri.jp) and  
[www.tasca-modelismo.com](http://www.tasca-modelismo.com)



### Live Resin

Let's fill in the gaps a little on the Live Resin lineup of modern small arms and figure accessories. These items all appear to be derivatives of products we saw on that monster list in the last issue: LRE35017, M240B Military Systems Group Inc. H24-6 Machine Gun Mount with HMMWV mount and Armour Shield; LRE35018, M240B/M249 Military Systems Group Inc. SA1 Swing Arm a Double Articulated Gun Mount Support with H24-6 Machine Gun Mount; LRE35028, US Army scope set 3 - Aimpoint



Comp M4 Red Dot Sight M68 Cco (Red Dot Sight NV Compatible), ELCAN Specter DR 1-4x SU-230/PVS, AN/PVS-14 Monocular Night Vision Device, Schmidt Bender with Barrett

BORS (Barrett Optical Ranging System) Ballistic Computer, Thermal sight AN/PAS-13A/B(V)2 (MVTs) Thermal Weapon Sight (TWS); LRE35067, US Army Modern Heads with ESS Crossbow Goggles and LRE35068, US Army Modern Heads with ESS Crossbow Goggles and Peltor Communication Headsets Comtac II - Comtac ACH.

Website: <http://live-resin.com/>

### Mantis Miniatures

More great resin 1:35 scale figures are out now from Mantis.

They took a short break from WWII Germans to produce: 35052, U.S. AFV Driver/Mechanic,



€12.00; 35033, U.S. AFV Gunner, €12.00 and 35034, U.S. AFV Crew, €22.00 (this is the set of the previous two figgies). However, that didn't slow them down a bit and they bounced right back with some more winter krauts: 35036, LSSAH Officer, Ardennes, €12.00; 35037, LSSAH Grenadier, Ardennes, €12.00 and LSSAH Kampfgruppe Hansen, Ardennes, €22.00 (this is the set of the previous two).

Let's not forget the animals. 35035, Animal Set 9, €12.00 includes a beaver, two otters, a rabbit, two porcupines and a lobster. 35039, Animals Set 10, €12.00 is a variety of rather charming mice and rats, perfect for a trench diorama! Mantis also came out with some really cool little guys: 72001, German Officers, WWII, €12.00 is a set of three SS dudes in winter gear from the Battle of Kharkov.

Website: [www.mantisminiatures.pl](http://www.mantisminiatures.pl)

### Masterpiece Models

One update from Masterpiece Models has just one item: CD7001, 1:35 World War I or II Canal Dyke Bridge, \$34.95. This is listed on the website as a re-issue, but it's news to us. It looks like there is enough room on the base footprint for a small vehicle and/or several figures. We think this would be a great starting point for a vignette featuring some G.I.s doing a little grenade fishing.

Website: [www.masterpiecemodels.com](http://www.masterpiecemodels.com)



### Meng Models

It's nice to see that the new Chinese styrene companies don't shy away from doing modern vehicles. Meng's latest announcement is TS-001, Merkava Mk.3D Early. We are anxious to see how this kit compares to the older Academy offering. We also received information through covert sources that Meng is working on a Russian T-90. It's just a rumor. Hmm...

Websites: [www.meng-model.com](http://www.meng-model.com) and [www.stevens-hobby.com](http://www.stevens-hobby.com) (U.S. Importer).



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### Merit Production

Usually when we think of Merit International we think about AFV Club and Hobby Fan, since they are the U.S. Importer for both of those companies.

However, a little browsing around their website will show that these two line are just the tip of the iceberg. They also have their own lines called Merit Production that features pre-built and painted replicas. We recently got a sample of MIL-86002, 1:16 WWII Soviet T34/85, Kurland, Eastern Front, 1944 and wanted to show it off. They also have a big Tiger I: MIL-86001, 1:16 WWII German PzKpfw VI Tiger I, Kurland, Eastern Front, 1944. We also thought that the aircraft carrier sets were nice, but that's way beyond the scope of this magazine.

Website: [www.merit-intl.com](http://www.merit-intl.com)



### Mini Art

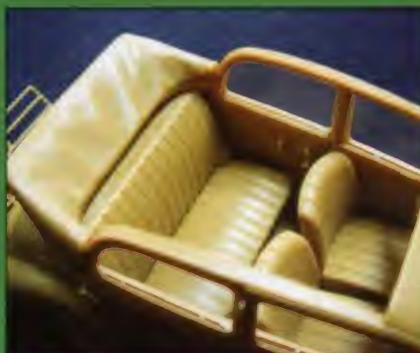
Mini Art is another contender in the soft skin game. In MMIR 55, the big news from them was their version of the MB170 German car. Now they have two convertible versions: 35103, MB Type 170V Cabrio Saloon and 35107, German Staff Car MB Type 170V Cabriolet. These guys love their Russian GAZ trucks and have three new models out now: 35124, GAZ-AA Cargo Truck; 35134, GAZ-MM Mod.1943 Cargo Truck and 35136, GAZ-AAA Mod. 1940, Cargo Truck. We also got wind of two versions of a Russian artillery tractor that are imminent: 35052, Ya-12 Soviet Artillery Tractor and 35140, Late Production Ya-12 Soviet Artillery Tractor.

These are naturals, as they use components of the SU-76 SPG.

As far as figure sets go, there is a nice selection on the way: 35141, German Tank Crew "Afrika Korps"; 35144, French Civilians; 35148, Market Garden" Netherlands 1944 and 35081, Soviet Artillery Crew On Maneuver.

As far as diorama accessories go, we saw two new ones: 36039, Diorama with Ruins and 36048, Bricks Pavement.

As far as websites go, we have these: [www.miniart-models.com](http://www.miniart-models.com) and [www.modelrec.com](http://www.modelrec.com) (U.S. Importer).



### Mini Arm

Something in the air tells us that the recent releases from Trumpeter, Tamiya and Zvezda will revive interest in modern Russian armor quite a bit. It is a bit of luck for everyone that we have Mini Arm around for filling the bill when it comes to fine detail. We went by their re-designed website and dug this list up: B35048, Wheel set ID-P284 for 6X6 Truck URAL-4320 (late); B35049, Wheel set OI-25 for 6X6 Truck URAL-4320; B35051, BMP-3 Road Wheels Set; B35052, BMP-3 Workable Tracks Set Plus Extra & Drive Sprockets; B35054, T-54A/T-54BV/T-55 (early) Road Wheels Set; B35055, T-55/T-55A/T-55AM Road Wheels Set; B35056, T-62 Road Wheels Set; B35057, T-55 (late)/T-62 Workable Tracks Set Plus Extra & Drive Sprockets (Rmsh); B35058, T-55AM Conversion Set; B35059, DSK-m 12.7mm Heavy Machine Gun; B36060, NSVT



12.7mm Heavy Machine Gun; B35061, BTR-60P Road wheels Set (Trumpeter) and B35062, BRDM-1 Road wheels Set (Eastern Express).

Website: [www.miniarm.com](http://www.miniarm.com)

## FRENCH CIVILIANS

WW II MILITARY MINIATURES SERIES



### MK35

Our buddies at MK35 had three new products last time we looked: A033, Straw - Hay, €2.10; F223, WWII French Gendarme No. 2, €10.80 and VB08, Forest Way, €15.00. This is a vignette base with a medium sized pine tree. Their line of 1:35 scale buildings is excellent.

Website: [www.mk35.com](http://www.mk35.com)

### Panzer Shop

Panzer Shop seems to be the only company on the face of the planet to give a crap about WWI tanks lately. They have just recently put out three versions of the uniquely ungainly French Schneider tank: PS35C156, Schneider CA-1 Char (Early Model - Initial Type), \$160.00; PS35C157, Schneider CA-1 (Add Armor-Final



Type), \$170.00 and PS35C159, Schneider CA-1 Improved Armor, \$170.00. They also put out a British model, PSC35C147, Medium C "Hornet" (British WWI Tank), \$160.00 and a German Dummy tank, PS35C158, Mk.1 German Wooden

Dummy WWI Tank, \$95.00. The German dummy tank mimics a British Mk. IV and is made of laser cut wood and resin parts. Those are just the newest items. They also have some other resin full kits from WWI and accessories to dress up those rusty old Ehmar kits.

All this First World War excitement does not mean they have abandoned their Warsaw Pact



roots. They also have some new conversion sets that can be used with the Trumpeter BTR-50PK or PT-76 kits: PS35240, OT-62 A/B TOPAS APC Vehicle, \$55.00; PS35241, OT-62 BETA w/ BzK vz.59 Leaking Gun (Recoilless Rifle), \$55.00;

PS35242, OT-62C Topas w/ 14.5mm Machine Gun Turret, \$55.00; PS35243, OT-62 R2 Command Vehicle, \$55.00 and PS35244, DTP-62 Workshop Vehicle, \$55.00.

Panzer Shop also has a number of sub-lines. JP Hobby has two new offerings with a German WWII theme: JP35027, SdKfz.251 Pritchen (Dragon), \$40.00 and JP35C16, Waldschlepper RS-1500,



\$95.00 while Katana indulges in another oddball Japanese offering: K35C20, Type 4 Ha-To, \$195.00. This is a Japanese 300mm mortar carrier from WWII.

Website: [www.panzershop.cz](http://www.panzershop.cz)

### Reality in Scale

Reality in Scale has been busy all across the board with a variety of diorama accessories. The new resin accessory list looks like this: 35171, Mini Statues Set, €9.95; 35172, Tree Stumps & Mushrooms Set, €12.95; 35173, "Aphrodite of Milos" Vignette Base, €17.95; 35175, Late Renaissance Church Facade, €75.00; 35176, "Caryatide" Vignette Base, €18.95; 35177, Sidewalk Super Set, €16.95; 35183, Basic Column Set, €18.95 and 35178, Sandbags Set, €12.95.



As far as printed accessories go, Reality in Scale is the bomb. The latest items are: 35170, German War Flags WWII set 2 on Real Cotton, €8.50; 35174, German War Banners for Buildings, €8.50; 35179, Enamel Street Signs - Italy, €5.95; 35180, German War Flags & Vehicle Pennants WWII, €6.95; 35181, German Air Recognition Flag WWII Decals, €6.95 and 35182, American Flags WWII on Real Cotton, €8.50.

Reality in Scale is also at the forefront when it comes to diorama ground cover. Remember Mud in a Pot and Snow in a Pot? Well, now they have Nature in a Pot. Amazing! Take a look at these: Flow01 Natural Flower Bushes, €9.95 and Flow02, Small Flowers A, €9.95. You can also get a variety of scale trees from them, like Tree01, Natural Bonsai Tree Bushes, €7.95. To be honest, we could take the rest of the magazine to show this stuff off, so go to their website and see for yourself.

Website: [www.realityinscale.com](http://www.realityinscale.com)

### Perfect Scale

Until now, the only way to make an M578 Armored Recovery Vehicle was to buy the Italeri kit of the M1 howitzer-prepped howitzer and then dig around at Hobby shows for the Verlinden conversion. Well, the bad old days are over. Perfect scale has decided out not one but two kits of this tracked wrecker from the Cold War: 35088, M578 ARV with Interior, €135.00 and



35089, M578 ARV, €120.00.

That's not the only good news. There is a small host of modern accessories that are now in stock: 35081, M1022 Ammunition Trailer, €26.50; 35084, Marder 1A5A1 Air Condition, €11.95; 35099, M107 / M108 Tracks, €16.50; PZ004, Useful Leopard 2 PE Parts, €10.50; DEC014, German ISAF Mackines Decal Part 2, €6.50 and DEC017, M1 Names Decal Part 1, €5.00.

Website: [www.perfect-scale.com](http://www.perfect-scale.com)



### Resicast

For years, Resicast has been thinking up ways to make the Tamiya Universal Carrier better. Their latest in this line of thought is 35.1224, Conger, €59.50, the flamethrower version.

Another interesting item for wrecker buffs out there is 35.1223, Light Recovery Trailer 7.5ton, €65.50. They also turned out some beat up gas cans (35.2340, Burnt Out and damaged UK Jerry Cans, €15.50) and a bevy of new figures: 35.5631, "Halte ... Une Fois" Belgian Soldier 1940, €12.50; 35.5636, Medic with Stretcher, €12.50; 35.5637, Officer Leaning, €12.50 and 35.5638, "Come on," €12.50.

Website: [www.resicast.com](http://www.resicast.com)



## SKP

SKP has gone ahead and pulled out all the stops to produce 060, ACV Dorchester, €38.99. This is a full kit of the British Armored Command Vehicle that was based on the Matador chassis. The kit has a combination of resin and injection

molded parts as well as photo-etch details. Also new are two accessory sets: 135, Lenses and Tailights for BRDM, €6.40 and 149, Wheels for M1117, €6.40.

Website: [www.skmodel.eu](http://www.skmodel.eu)



## Tank from Russia

Usually when you think of Tank from Russia, you envision masses of resin Mini Men from the Eastern Front of WWII. That's not all they do, though.

They have a huge lineup of 1/35 scale small arms and the list just got longer.

Their take on the good old Browning .30 Cal water-cooled machine gun looks like this: A-245, 7.62 (30 cal) LS M.G. Browning M1919 (Water Cooled) on Tripod (Early Model); A-246, 7.62 (30 cal) US M.G. Browning M1919A4 (Air Cooled) on Tripod M122; A-247, 7.62 (30 cal) US M.G. Browning M1919A4 (Air Cooled) Mounted on Tank; A-248, 7.62 (30 cal) US M.G. Browning M1919A4 (Air Cooled) Mounted on Tank (Late Version) and A-250, 7.62 (30 cal) US M.G. Browning M1919A6 (Air Cooled) infantry. If you need some small arms for your figures, these might help: A-251, 7.62 (30 cal) B.A.R.; A-254, Soviet Sniper Rifle Mosin (w/ Camouflage) and A-255, Soviet/Russian Sniper Rifle SVD (w/ Camouflage). German light machine guns also get special treatment: A-281, MG-34; A-282, MG-34 (Panzermantel); A-283, MG-34 (Panzermantel) Tank Version; A-284, MG-34/41 (MG-34S); A-285, MG-42 (Early) and A-286, MG-42.

The real surprise, at least to us, is this huge list of resin vehicle accessories: A-270, Sprocket and Idler for Soviet Tanks T-54/T-55/T-62; A-273, Forward Skating Rink with the Strengthened Nave on T-55; A-274, Sprockets for German Tractor "Steyer RSO"; A-275, Sprocket and the Idler on T-34-76 STZ; A-276, Idler for T-34-76 STZ (late type) and on T-34-76 of 112 Factory; A-277, Cast Basic Skating Rinks (With Internal Amortisation) T-34-76 STZ (Standard) 1942 Year; A-278, Cast Basic Skating Rinks (With Internal Amortisation) T-34-76 Factory 119 (Late, Strengthened); A-279, Balance Weights T-34-76 STZ; A-287, T-34 Tor-

## Stalingrad

While we are on the subject of Russian figure companies, let's talk about Stalingrad. Lately, they have been doing some really large sets of up to 10 figures such as S-3510, "Under Fire" Red Army Infantry, 1941-42 (8 figures), S-3520, German POWs, 1944-45 (10 figures) and S-3030, German infantrymen at Rest 1939-44 (10 figures). For picky modelers, the good news is that you can get the figures in these sets individually, too.

A smaller multiple-figure set also came to light very recently: 3001, German 8 cm Mortar Crew (4 figures). Finally,



two new single figures are 3002, German Ammo Carrier and 3003, German Infantry NCO.

Website: <http://stalingrad.diorama.ru/>

ret Interior; A-288, T-34/76 STZ 1941, Early, Welded Turret; A-289, T-34/76 STZ 1941-42 Turret, Made By Factory No.264 Early, Cast and A-290, T-34/76 STZ 1941-42 Turret, Made By Factory No.264 Late, Cast, Intensified. T-34 fans rejoice!

Website: [www.tank-model.ru](http://www.tank-model.ru)



## Tankograd

Tankograd has been doing some really nice work on WWI reference books lately. Two new volumes that take a look at the war from a German point of view are World War One Special 1005, Grabenkrieg - German



Trench Warfare Vol. 1, €25.00 and World War One Special 1006, Grabenkrieg - German Trench Warfare Vol. 2, €25.00.

Website: [www.tankograd.com](http://www.tankograd.com)

### Tank Workshop

DEF Model is not the only game in town if you want some replacement wheels for your M1070 Tank Transporter. Tank Workshop has two options available. TWS0112, **M1070/M1000 Wheel Set (Hobby Boss)**, \$71.00 is a complete set of 51 wheels for tractor and trailer while TWS0113, **M1000 Heavy Semi-Trailer Tires (Hobby Boss)**, \$48.00 is a set of 42 tires for the M1000 trailer only.

Tank Workshop has also been doing a lot of work with 1:48 scale Sherman upgrades. Check these out: TWS48005, **M4A4 Upper & Lower Hulls**, \$35.00 and TWS48007, **M4A1 Hull w/ Cast Applique Armor**, \$18.00.



Finally, they have one new accessory for Russian armor fans: STZ042, **BTR-60P Canvas Roof (Trumpeter)**, \$10.00.

Website: [www.tankworkshop.com](http://www.tankworkshop.com)

### Trumpeter

Trumpeter has been doing a lot of Russia stuff lately, both WWII and modern. We are very pleased. For instance: 1554, **Russian T-62 RDR Model 1984 Main Battle Tank**, \$57.95 is a new new spin-off of their 1462 kit. If that doesn't stop you in your tracks, how about something completely new like 01578, **Russian T-64A Model 1972 Main Battle Tank**, TBA? We can't wait for this one. Hopefully we will see some T-80 variants in the near future too.



Of course, the really BIG news is the release of two versions of the SdKfz. 8 halftrack: 1584, **SdKfz. 8 Schwerer Zugkraftwagen 12t** and 1585, **8.8cm Flak 18 Selbstfahrlafette**. Both are price TBA.

Here are the rest of the new arrivals: 1505, **Canadian Grizzly GM Armored Personnel Carrier, Improved Version**, \$39.95; 1506, **Soviet KV-1S Heavy Tank**, \$54.95; 2018, **Late Panther Workable Track Link Set**, \$34.95; 2055, **Stry 103 Workable Track Link Set**, \$34.95; 2057, **E-25 Workable Track Link Set**, \$34.95 and 5511, **Russian BRDM Amphibious Armored Scout Car, Early Version**, \$64.95.

Websites: [www.trumpeter-china.com](http://www.trumpeter-china.com) and [www.stevenshobby.com](http://www.stevenshobby.com)



### Tasca

The latest news from Tasca has a lot of people at Ampersand World Headquarters throwing fruit and making monkey noises. They have announced but not yet released a kit of the M32 wrecker that was based on the Sherman chassis: 35-026, **Tank**

**Recovery Vehicle M32B1, TBA.** Finally there will be an accurate alternative to the ancient Italeri kit.

In other Sherman news, they have re-boxed their M4A1: 35-025, **U.S. Medium Tank M4A1**



**Sherman (Direct Vision Type).** This kit includes styrene bogie spacers to replace the old foam ones.

Tasca will also be making their excellent Sherman HVSS suspensions available as separate items very soon: 35-L35, **M4 Sherman HVSS Suspension Set w/ T-80 Tracks**, Y2940 and 35L-36, **M4 Sherman HVSS Suspension Set w/ T84 Tracks**, Y2940.

We made another interesting find when we went



**Jerrycan Set, 1050.**

Website: [www.tasca-modellismo.com](http://www.tasca-modellismo.com)

by their website: OL-3, **1:24 German WWII DAK Panzer Crews**, Y3150. This is listed as available in Japan only, so we're still wondering how to get one.

Also available now to compliment your big Panzer II kit is: 24-003, **1:24 Scale German**

### Verlinden

The list from Verlinden this issue is shorter than usual but we guarantee a lot of you will find something useful here: 2708, **Panzerwerk Milling Machine**, \$22.95; 2710, **SIG 33 Ammo/Cases**, \$14.95; 2711, **120mm Greek Slinger**, \$26.95; 2712, **Marder III Crew - Ammo - Stowage**, \$32.95; 2715, **Recon Iraq/Afghanistan**, \$16.95; 2716, **Gantry Crane Panzerwerk**, \$42.95 and 2717, **Cobblestone Street/Road (Fits 1145)**, \$16.95.

Website: [www.verlindenonline.com](http://www.verlindenonline.com)



## Vulcan

We haven't talked about Vulcan in a while. Recent big news from them was the release of two variants of the Vickers Mk VI light tank: 56008, British Light Tank MK VI B and 56009, Light Tank MK.VI C.

We got a sample of 56009. Here is a peek at



the goodies. The Mk. VI was widely considered the best light tank in the world in 1939. They saw service in France and North Africa in the early part of the campaign. The suspension was later used on the Universal Carrier series.

Websites: [www.vulcanmodels.com](http://www.vulcanmodels.com) and [www.stevenshobby.com](http://www.stevenshobby.com) (U.S. Importer)

## WWP

WWP has long been a leader in delivering full-color reference books. We love 'em. They are a bit pricey, but worth it if you are a detail fanatic.

The latest list we received was:



**Special No.10 - M4 & M16 Carbine Family; G029, Special Operations Landies in Detail** (includes S1, S3, 110 DPV, 110 Recce, SOV, Wolf, Cayman and armored Shorland vehicles); G030, Ferret Scout Cars; G031, M923 Trucks Family; R067, Bedford QL 3-



ton WWII Trucks; R069, Zundapp KS 750 in Detail; R070, MA Jeeps in Detail; R071, M7B Priest in Detail and T003, Damplok BR 57 Train in Detail No.3. Keep an eye out for these in our book reviews section where we take a look at a WWP title every issue.

Website: [www.wwpbooks.com](http://www.wwpbooks.com)



## Nuts & Bolts Volume 27: 2cm Flakvierling 38

By Detlev Terlisten

Published by Nuts & Bolts GbR

160 Pages B&W with Color



LET'S KICK OFF BOOK REVIEWS with a no-holds-barred uber-fest of detail. We never thought we'd see such an in-depth book on any Flak gun, but *Nuts & Bolts* really pulls this one off nicely. The Flakvierling combined four 2cm AA guns into one mount to create a very potent weapon system that we have all loved since Tamiya first rendered it in 1:35 scale way back when. So, what do you get

in this *Nuts & Bolts* edition? The text located at the front is a detailed technical description that includes unit and deployment information and a guide to available model kits. Throughout the 160 pages are a total of 336 photos.

There are 169 period photos and full color photos of ten surviving examples. Lots of line drawings (65) and twelve color plates are in the middle of the book. A lot of work went into the details of this weapons system, especially the sighting devices. A profile of the Sd.Anh.52 trailer and gobs of photos of half-track mounted guns are in there, too. Tony Greenland proves that he is still Darth Vader with a splendidly detailed version of the Dragon kit that is highlighted with 18 color photos. This is easily the most comprehensive work available on the Flakvierling we've ever seen.

## Nuts & Bolts Volume 28: Gleisketten-LKWs

"Maultier" (Sd. Kfz. 3)

By Joachim Baschin

Published by Nuts & Bolts GbR

160 Pages B&W with Color



THE PRIMITIVE ROAD NETWORK on the Eastern Front in WWII meant muddy conditions that rendered most wheeled vehicles immobile. As a solution, the Germans came up with four different models of half-track trucks

based on already available chassis: the Magirus S3000, the Ford V3000, the Opel Blitz, and the Mercedes Benz L4500S. The Maultier's main task was to transport ammunition but it was also used for towing,

transporting troops and as an ambulance. *Nuts & Bolts* 28 covers all four models in this one book. The highlight of the first part of the book on development and deployment is a monster allocation table that details what formations were equipped with Maultiers. For the modeling portion, Tony Greenland actually built one model of each type using the Zvezda kit for the 4500, Cyber Hobby's Opel with Italeri parts, ICM's Ford V3000 with Italeri and the old New Connections Magirus in resin. He gives a short commentary on each project along with a kit list. A very large treasury of period photos follows, probably the most we have ever seen in one publication on the Maultier. As if that wasn't enough, there are 24 pages of line drawings and 16 color plates! Pages 129 through 154 are all full-color walk-around shots of surviving examples. To conclude, *Nuts & Bolts* picks up with Tony Greenland's projects with some in-progress and finished full color captioned photos. This book blew us away. It may be the best *Nuts & Bolts* title yet. Thanks to Heiner F. Duske for the both review copies of N&B 27 and 28. The *Nuts & Bolts* website is at [www.nuts-bolts.de](http://www.nuts-bolts.de)

## R056 M51 IDF Sherman in Detail

By de Boer, Prigent and Velek

WWP Publications

68 Pages Full Color

ISBN 978-80-86416-89-2



SINCE DRAGON, ACADemy and now Tamiya all have kits of the M51 Sherman, it's about time someone came out with a nice reference walk-around. As with all

WWP titles, this is a very straight forward and complete reference work. Three surviving

examples of the M51 and one M50 are on display here. The M50 from Latrun is covered first with two overall shots and eight detail photos. As for the M51, two of the vehicles are in Israel, one at Latrun and the other at a monument in Jerusalem. The third is in a private collection in Holland. The example from Holland is actually a runner. Most of the book is made up of photos from the

Dutch vehicle. The walk-around photos are quite extensive and include multiple close-ups of most of the major exterior details. Some interior shots are included at the very back of the book. All of the photos are full color.

This is a must have for anyone who wants to take on the mightiest of all Shermans.

Thanks to Frantisek Koran at WWP ([www.wwp-books.com](http://www.wwp-books.com)) for the review copy.

**Tankograd in Detail:  
Dragon Wagon Tank Transporter M25**  
By Jochen Vollert  
Tankograd Publications  
96 Pages Full Color



WE REALLY DIG THE Tankograd In-Detail series. This is the third one we've looked at, having previously reviewed tomes that on the Panther and



the DANA. The Tamiya Dragon Wagon has been a perennial favorite with modelers who like to think big. There is a short textual introduction with a few period photos before you plunge into the real meat of the story, which is a full-color technical walk-around of a completely restored M25 Dragon Wagon that resides in the UK. The text is entirely in English. There are a total of 212 photos of both the tractor and trailer. The M26 tractor gets great coverage, both inside and out. There are even shots of the dismounted engine and the spare tire crane deployed. The M15 trailer is covered last. Since the vehicle is a runner, there are also some "in-action pictures," both with the trailer attached and a restored Sherman aboard and with the tractor towing a restored M10 tank destroyer. The captions throughout are informative and authoritative. This is not only an excellent modeling reference but also a beautiful book just to have to look at. Thanks to Jochen Vollert for the review copy. To order yours, go to [www.tankograd.com](http://www.tankograd.com) and look under the Books heading.

**Scale Model Handbook: Figure Modelling 1**  
Mr. Black Publications  
50 Pages Full Color  
ISSN 2241-1054



MR. BLACK PUBLICATIONS A NEW company headed up by our old friend, Stelios Demiras. This title is their first effort. At 50 pages, it's a compact book that seems to have two purposes. The first and perhaps most relevant intention is to educate readers on different figure construction and finish techniques. The second function is that it is a showcase of some of the best figure modelers out there today. The figure subjects come from many points along the historical

timeline and each small chapter covers a specific modeling technique. A few examples of this are a Roman soldier used to illustrate detailing using epoxy putty, a Maya warrior and an ancient Greek bust used to talk about painting flesh tones, a Fallschirmjäger officer for painting WWII figures and a medieval Scottish warrior to demonstrate combining oils and acrylics for finishing. All of the photos in this book are full color. Construction materials and specific paint mixes are covered in detail. Figure modelers looking to up their game will come away with something from this book regardless of whether they are interested in a particular era or not. Thanks to Mr. Demiras for the review copy. You can order your copy direct at [www.mrblackpublications.com](http://www.mrblackpublications.com)

**Beutepanzer No.1**  
By Pascal Danjou  
Published By Editions du Barbotin  
82 Pages B&W with Color  
ISBN 978-291766113-0



AT THE END OF THE FRENCH campaign in 1940, the Germans found themselves with a boatload of captured vehicles. In fact, they were able to equip four divisions for the invasion of Russia with French armored vehicles. Now, we've been wondering for a few months what Editions du Barbotin has been up to and this appears to be the answer. They have collected a bunch of photos to make a really nice reference on all of

this captured French armor. This appears to be the first volume in what we hope is an ongoing series. There are 110 period photos included. The vast majority of the pictures are nice and big, being either half-page or full-page format. The Panhard Armored Car, Renault UE, Renault FT, Renault R35 tank, Hotchkiss H35, Somua S35, Char B1 Bis and other modified vehicles all receive good coverage. As usual for this publisher, the text and captions are in French and English. At the very back, there are 15 color plates at the very end that each has a small companion photo of the real vehicle. This is a great reference for the particular topic. Hopefully, manufacturers will take notice too so we can see modern styrene editions of the Panhard and Somua S35 among others. Thanks to Pascal Danjou for the review copy. Get yours at [www.minitracks.fr](http://www.minitracks.fr)

**Die Wehrmacht: 2cm Flak & Flakvierling**  
By Robert Johnson  
Feist Books  
152 Pages B&W with Color



THE GERMAN 2CM FLAK gun had multiple incarnations, as it was a versatile weapon that proved effective against both aerial and soft ground targets. This new effort by Feist books is a survey of the 2cm Flak that explores the different models and their mounts.

There are 146 photos in total. The first half of the book focuses on the three main models (Flak 30, Flak 38 and Flakvierling 38) as ground mounted weapons



with good photographic coverage of the details as well as period photos showing the weapon deployed with the crew at their stations. Perhaps the best coverage goes to the Flak 30, as there are several pages from the technical manual. The Sd.Anh. 52 trailer and the sighting devices are also featured. The second half of the book illustrates the wide variety of vehicles that mounted the different models of 2cm Flak on trucks, half-tracks, armored cars and fully tracked vehicles. In particular, there are lots of photos of the Sd.Kfz. 10/4 1-ton half-track. Other popular topics are not left out, though. There are also shots of the Sd.Kfz 7/1 with Flakvierling, the Wirbelwind and even a few of the 2cm mounted on the Pz.I Chassis. Anyone building 2cm Flak guns will find this to be an excellent all-around reference. The only sticking point may be the price tag of \$40.00, which is a bit steep for a soft cover book. Thanks to Uwe Feist for the review copy.

**AFV Photo Album: Armoured Fighting Vehicles on Czechoslovakian Territory 1938-1968**  
By Solar, Dolezal and Kos  
Canfora, Grafisk, Form & Forlag  
224 Pages B&W with Color  
ISBN 978-97-976733-6-3



THIS BOOK IS SORT OF HARD TO pigeonhole. Looking through the first three quarters or so, one gets the initial impression that this is an edition of Panzerwrecks on steroids with some Soviet stuff thrown in, but it's really much more than that. True, there is a lot of knocked out Kraut armor. However, there's a really nice survey of late war Soviet equipment in here too, so coverage of both sides is actually pretty well balanced.

Perhaps the sweetest surprise starts on page 170 with panoply of very crisp photos of U.S. vehicles from May 1945 (including a shot of one of the Sherman World's Holiest of Grails: a 75mm HVSS M4A3) followed by a short photo essay on the Cromwell. After that, the authors dial back the clock to the pre-war days to present a survey of Czech pre-war armor. The camouflage schemes here are wonderful. The last photographic portion of the book is a collection from the Czech 1968 uprising, Operation Danube. There are lots of T54s, T55s and BTRs on display, some in color. At the very end of the book are 10 pages of very nice plates for the vehicles pictured throughout the book. The text is in English and Czech. There are some short background essays included in each section, but most of the written information is contained in the captions. Overall, we found this to be a very good survey that covers a lot of ground with enough depth to be considered a valuable reference on each topic. Both WWII and modern armor modelers will get a lot of inspirational mileage out of this title. Thanks to Toni Canfora for the review copy.

# leichte Zügkraft



# wagen 3t (Sd.Kfz. 11/1 late)

In this feature, we present a shortened version of Mario Eens' fantastic and lengthy story on the Sd.Kfz. 11 halftrack. He spent hours detailing and converting the late AFV Club kit and the Tamiya DKW (the bike is omitted here). It became such a large project that it was eventually made into a book called: *In Detail Modelling Constructing, Painting & Weathering The DKW NZ 350 & Sd. Kfz.11 Late Version*, ISBN 978-94-91087-00-4. The publisher is Add-on Publishing ([www.addonpublishing.com](http://www.addonpublishing.com)). The following article will provide a little taste of what Mario was up to and will hopefully inspire you to buy it! Look for a full review of the book in MMiR 55.

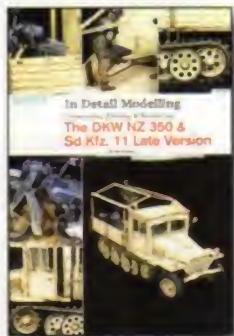
Originally designed for towing mid-sized howitzers, the Sd.Kfz. 11 half-track was used on all fronts in Europe and North Africa during WW2. Lack of materials in the later stages of the war caused considerable simplification of its production procedure and changed the look of the vehicle drastically. Most of the upper hull was made up of wood. The engine compartment was lengthened and the driving cabin closed up. The steering wheel was

replaced with a downward tilting one like in the Sd.Kfz. 251 halftrack series. The chassis remained unchanged. During the last days of the war the halftrack had many uses besides towing artillery.

#### The story

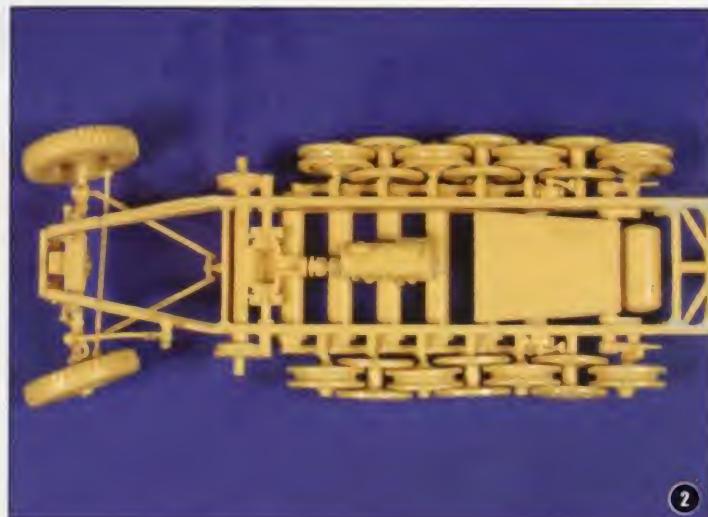
With this model I want to tell a little story set in Germany at the end of the war. The halftrack seems to have been abandoned, probably because of some mechanical failure. The opened up floorboards in the cargo deck seem to suggest the crew wanted access to the transmission. Also the keys are still in the ignition.

A GI inspecting the abandoned vehicle is fascinated by what he has found in the back—a DKW motorcycle. The smile on his face says it all.





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He can picture himself riding this beauty back home. Wouldn't that be a great souvenir!

When starting on a model it is always a good idea to think out all the details before hand. Even if this is "only a model" and not a diorama or vignette, you can still tell a story. To make the story interesting and above all, pleasing to the eye, you need to plan it carefully.

This means that I make a mental picture of the finished model in my mind even before I do any work on it. I try to visualize it finished in the color and weathering I want it to have. This also means that I visualize all the accessories with their different colors and textures and work out exactly where they go to create a visually attractive model. Accessories in different colors and textures can add a lot of life to a model, especially on monotone colored ones.

Making a model is like making a painting. Composition is therefore very important. If the composition doesn't work, the model will look unattractive and uninteresting. This goes deeper than you might think. Not only is the composition of all the accessories on the model important, but also the composition you can create with the different colors and textures of the accessories, and beyond that the

color and weathering of the model itself.

Composition is so important that even the smallest of details are affected by it. Most modelers nowadays add chipped paint effects to their models. But not all of those models are pleasing on the eye. Have you ever wondered why? Often the reason for you not being interested in looking at the model for a longer period of time is because the chipping looks unrealistic because the shape, and above all, the composition of the paint chips is completely wrong. This might be taking things quite far and you've probably never wondered about it, but try it out. Take your time and look at various models and then try to determine why you like some models better than others. Apart from the degree of finesse, which of course also will have an influence, you will notice that in the end it all comes down to composition...

By this time you might be wondering what exactly is the right composition? Well, to keep it simple diagonals always work. Take a look at some classic paintings, or even successful dioramas. You will notice that there will always be diagonals that lead your eye to certain focal areas. From front to back, low to high, left to right, etc. Now take a look at models with appealing chipped paint effects. You will always detect those diagonals. No matter how small

they might be. And notice how they relate to each other in the overall picture. Anyway, back to the planning of the model...

I determined to put a motorcycle against the right side of the cargo area in plain view. As the motorcycle is the essence of the story it also should be the main focal point of the model. This unfortunately also means that the GI has his back turned to the viewer and you cannot instantly see the smile on his face. But doing it the other way round and putting the motorcycle against the left side wouldn't work as you wouldn't have a good view on the motorcycle, which is what it is all about in the first place.

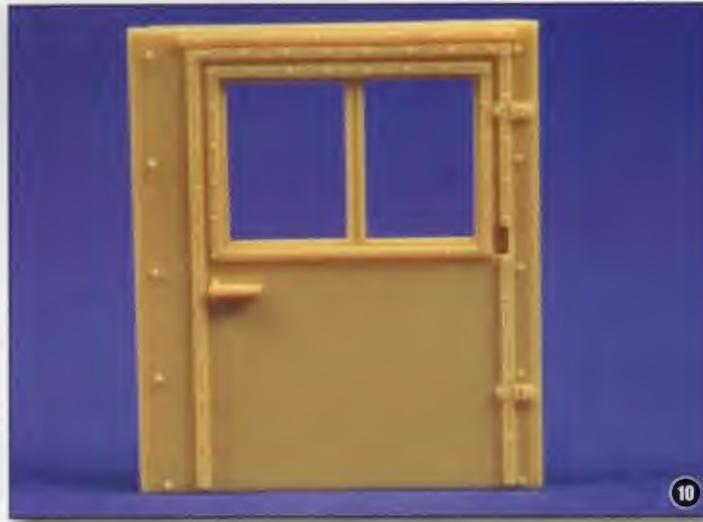
Now there had to be a reason for the motorcycle to be in the back of the truck. A simple explanation would be a flat tire. To create further interest I decide to break up the floorboards to gain access to the transmission. This would explain why the truck has been abandoned with the keys still in the ignition. Opening a door will give the viewer a look into the cabin and create a further sense of abandonment. Opening both doors on the other hand would have broken up the lines of the model too much and spoiled the look.

#### Construction

Before starting construction I always try to gather



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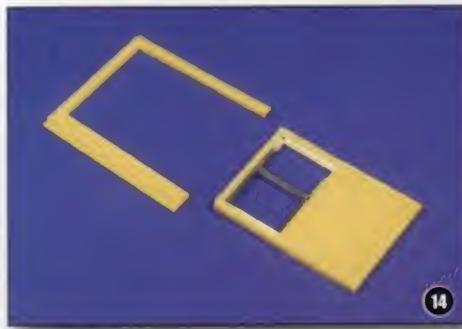
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er some reference material. Unfortunately, information on this model seems to be very scarce. All I have to start on were eight photos from the internet, kindly sent to me by a friend, showing a restored vehicle in a museum. Later I found out that this vehicle was quite heavily restored, so how far I can rely on it as being real reference material is another matter.

But I don't let that stop me. I like super detailing and getting things right, but when the information is not there, I just go on without it. Putting the model aside never enters my mind. Besides, the major challenge would be in the painting of this monotone colored model.

Being a perfectionist at heart I am simply unable to build a model straight from the box. I will always try to get the details as correct as possible. This slows down the construction process, as constant checking with my available reference material takes time. Luckily, I really enjoy the time spent constructing small details. The bonus of refining the model in this way is that it will look much more realistic and more to scale. Moreover, it will help in the painting stages, as I will have to work less hard to add a touch of finesse because it's already present in the construction.

### Chassis

Assembling the chassis is pretty straightforward. Especially as most of it is not visible anyway. The aid of a good Aber set always makes the construction stage much more enjoyable. I like working with photo-etch as a good quality set improves the detail quite a lot—and it's fun to do. A fair amount of the photo-etch set is designed for the interior, which unfortunately means it will be almost impossible to see afterwards. Unless you leave the doors wide open...

During construction I like to create new little challenges. To keep modeling interesting and not repeat the same procedures with every project, which can become boring and mind numbing in the end, I always try to do something I haven't done before—or try to take things a little further. As with the painting, which was the main challenge of doing this model, I also try to add these little challenges in the construction phase. This way I use my brain and figure out how to tackle a certain problems. I will have to use my imagination, which will influence my creativity and hopefully make me a better modeler all round.

So this time instead of just turning the front wheels, as I always do, I decided to see if I could make them movable. This way I would be able to decide on

the final pose when the model had been finished.

Views of this are seen in photos 1 and 2.

### Driver's cabin

Next is the assembly of the driver's cabin. Scraping them with a scalpel thinned the undersides of the fenders. Further detailing on this part was carried out on the other side where a scalpel was also used to refine part of the gear housing. In case you think this is unnecessary work, you won't be able to fit the photo-etch tread plates later if you don't make some adjustments.

Fit of parts on the cabin was not perfect. The front panel needs some sanding on the front sloped part, as well as some retouching on the bottom to take the floor with the Aber etched tread plate. The rear panel also needs some sanding on the right hand side bottom curve to properly sit over the transmission (photo 3).

On the outside the front panel the molded windscreen wipers and the mesh in lean-to roof above it are removed. Also holes are drilled to take the Aber windscreen wipers (photo 4). On the inside, the rim around the window is carefully cut away as an Aber frame will replace this. To receive the photo-etch dashboard, I also need to enlarge the niche a little



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on the left side. The dashboard itself is made up of two layers between which two separate pieces of film are placed to represent the various dials. The large speedometer also needs to have a green and red section on it. This is simply painted on by hand from the rear using Vallejo paints. Thin pieces of white plastic card are then glued to the back of the rear photo etch layer to create the white color (**photo 5**). The base for the two handles on the right side of the steering wheel is carefully cut out of the original kit dashboard. The handles themselves are made with copper wire and knobs made from Magic Sculpt. Also part of the original kit steering column has to be saved. Most of this work can hardly be seen, but it's fun to do anyway (**photos 6 and 7**).

Although present in the kit, the Aber set provides nice tread plate floorboard replacements. I just glue them on top of the molded kit floorboards. This also means removing a location pin for the footrest and filling the holes with the two molded handles with plastic card to bring them up to the correct level. Photo-etch handles are used instead (**photos 8 and 9**).

#### Doors

In the kit, both doors are molded integrally with the sides of the cabin (**photo 10**). Leaving both

doors closed is not an option as this will definitely mean all the work on the inside of the cabin will be invisible. On the other hand I feel it will look better if only one door is opened instead of two. Both doors open will change the look of the cabin too much. The Aber set provides plenty of detail for the doors and with the working hinges can be made to open and close with a bit of work. This also goes for the windows in the doors.

I start by removing all the molded details from the inside of the doors including the molded window frames, as I wanted some of the windows open. The photo-etch window frames are soldered together to make a stronger bond. When soldering, I attach the pieces temporarily to a wooden block with some Blu-Tac. This way I can move the pieces around if necessary without having to touch them.

The most challenging aspects of the windows are the frames for the glass. These need to be folded in a U-shape, on four sides. Having shaped two sides, it becomes a bit tricky to do the remaining sides without distorting the entire frame. So I insert a piece of plastic card, which has the correct size and thickness. This way I can put some pressure on the frame without actually folding it closed. When three sides of the frame are folded, the plastic card

is removed. Before inserting the transparent plastic simulating the glass, the inside of the frame is painted with an appropriate Vallejo color. The simple reason for painting the inside of the frame is that because of the transparent plastic you will be able to see this. I do not use the transparent plastic provided with the Aber set, as this is quite thin. Instead I use a thicker variant cut from Evergreen sheet. **Photos 11 through 13** illustrate the work on the passenger side door.

Next I opened the driver's door. To do this I carefully start scribing the edge of the door from the inside with a sharp scalpel. I don't rush this step but take my time. I need to save both the door and the frame (**photo 14**). When the door is removed, I need to replace the hinges and the metal bands that run around the outside edge of the door as well as the metal bands around the window and one situated above the door. They are all provided in the Aber set. The only thing I didn't use was the metal sheet for the outside of the door itself. I just didn't see the need to. Besides it would make the door thicker (**photo 15**).

As I didn't open the passenger's door I also feel reluctant to remove all the nicely molded bands and detail to replace them with photo-etched parts. All I



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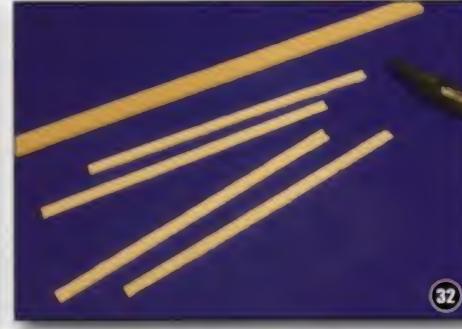
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did here is to remove the bolts and sand down the bands to the same thickness as the photo-etch parts on the other door. I then merely replace all the bolts. The bands around the window did need to be replaced as they are destroyed when removing the molded window. Also both doors are slightly sanded on the bottom to make them a little shorter (photo 16). The box art shows this feature very well. Photo 17 shows the doors in position on the cab.

To paint the interior of the cab I glue the front panel to the part with the fenders, but leave the floor, doors, windows, front window frame, seat, rear panel and roof separate. Everything that does not need to be painted is masked. Including the connecting surfaces between all the separate items. Punching out round masks from tape using a punch & die set masks the dials (photo 18).

When everything is painted and weathered the cab is assembled. Before adding the front window though this is masked with tape to make the windscreen wiper marks (photo 19). Once masked, a couple of very thin passes with a sandy yellow color in the airbrush provides the dirt. Before removing the tape I also hand brush a few streaks with diluted pigment powders to add some variation to the dirt. The reason for dirtying the window first instead of

later is because it is much easier to align the masks at this stage. Also it will be safer to remove the tape before putting the window in place (photo 20).

Before closing up the cab, the windows in the doors that are to be left open are taped off from the inside to prevent any unwanted paint from later painting stages entering the cab and destroying the work inside. Once in place, the front window is masked from the outside with pieces of paper tucked between the window and the outer frame.

Using masking tape can destroy the dirt effect of the windscreen wipers when being removed.

Photos 21 through 26 provide various views of the completed cabin interior.

#### Engine compartment and bonnet

Although a separate engine compartment is available from Aber, I decide to stick with the kit parts, as I don't want to open it up and show an engine. I have already done that on a previous model. Besides it will change the look of the model, which I don't want.

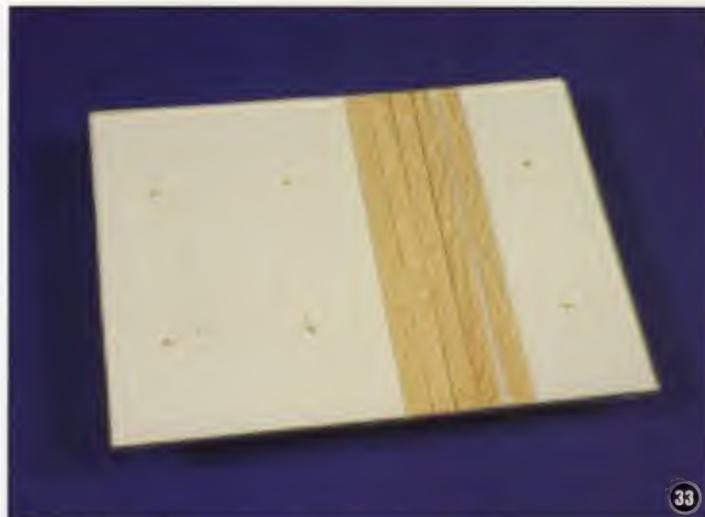
The molded hinge on top of the bonnet is rather square on the edges so I run a scalpel along side it to give it a rounder appearance. To actually add the structure of a hinge I make very small cuts at regular intervals along the entire length of the hinge again using a sharp scalpel.

Before adding the sides, I first remove all molded handles and clasps from them. Hollowing them out with a scalpel and a scribing needle refines the louvers. Also the triangular recess on the left side where the exhaust pipe comes out was opened up.

To give it the correct scale thickness the edges were beveled (photo 27).

As there is now a rather large hole in the side of the bonnet I make a black cardboard box, which I put in the engine compartment to obscure the empty look inside (photo 28). Also part of the compartment is painted black to make sure all visible angles were covered (photo 29). On the other hand, the area in front of the radiator is painted in the outer body color prior to adding the grille (photo 30).

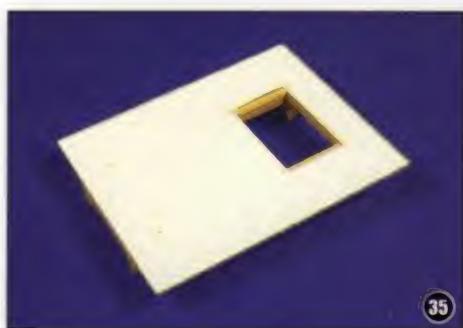
I assume the front grille provided in the Aber basic set is designed to be used in conjunction with the second set which includes the photo etched bonnet as it doesn't fit the nose as provided in the kit. Following the instructions, I have already removed the straps on the side of the grille with a pair of scissors. It is then I discovered something still doesn't match up. I could have easily used the grille provided in the kit, but the Aber part looks so



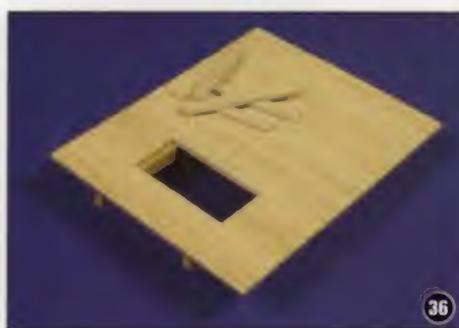
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much nicer with its finer thread and logo. After taking a closer look it seems possible to adjust it to make it fit. It merely needs to sit a little lower. Cutting a portion of the bottom part of the grille to lower it is easy enough. The more difficult part is to adjust the frame as this needed to stay the same width all round. This means the horizontal bar at the bottom should remain untouched. Instead I need to shorten the two vertical bars on either side. Again this is easy enough. The tricky part is that because the vertical bars are at an angle, they now no longer correspond with the horizontal bottom

bar, so the edges of the bottom bar need to be worked with some putty to match them up. The results are shown in photo 31.

#### Cargo deck

From the beginning I decide to replace the plastic kit planking with Balsa wood, as this would look much more convincing. Instead of using one large piece and engraving it to recreate the planking I want to use individual planks. After cutting a length of wood to size I halve it to end up with two planks of the correct width for the side panels (photo 32). The

planks are then sanded to the correct thickness to fit in the Aber bracket profiles. Incidentally, the Aber set provides all the necessary profiles and hinges.

To make the floor sturdier, I decide to use a piece of plastic card for the bottom and cover that with thin planking instead of using thicker wood throughout. A plastic square is glued into the metal L-shaped Aber profiles. The corresponding holes to add it to the chassis were traced from the original kit part (photos 33 and 34).

To create more interest and add to the story, I have in mind opening up the part of the floor that



accesses the transmission. This creates a new problem as I use thin planks on top of the plastic, which will look unconvincing around the hole in the floor. I cut back the plastic floor to show the beams on which it is mounted (**photo 35**). Then the wooden planking around the hole is made to look like thick pieces of wood by gluing another piece of wood to the bottom creating an L shaped end that sits over the edge of the plastic. The seam between the two pieces of wood was covered with putty and sanded. Once in place it looks quite convincing. The planks that were removed from the floor were made in the

same way by gluing two wooden strips together (**photo 36**).

Although not represented on the kit floor, there should be a second removable section of floor over the fuel tank. This is simply replicated by cutting the floorboards in that area and creating the contours of the opening (**photo 37**). Before gluing all planks to the plastic floor I first painted it black to create natural shading and get rid of any white plastic that might appear through the gaps of the planking.

### The figure

Because it will add some life and color to the model, I decide early on to add a particular figure both in pose and cut of uniform. Early khaki uniforms will not contrast enough so it has to be a later green one. This doesn't make the search for a suitable figure any easier. As time progresses and I don't find an appropriate figure, a friend and fellow club member Wim Van Hool, suggests sculpting a figure especially for my project. I did not think twice about accepting his generous offer and jumped at the chance to have a custom made figure on my model.

A pose is decided on and Wim starts sculpting from scratch using only Hornet hands and head,

shoes cut from a Legend figure, a copper wire frame and Magic Sculpt. The result is amazing. Used to dress the figure are

a photo-etch belt and holster from Royal Model, pouches from Dragon and Nemrod, and a canteen, also from Nemrod. The helmet was taken from an Alpine figure and is hollowed out to fit the Hornet head, which is partly scraped away at the top for a better fit. Buckles from Aber are used on the gaiters.

Wim's final sculpture is seen in **photos 38** and **39** and the painted miniature is seen in **photo 40**.

Views of the finished, but as of yet unpainted model complete this installment. The story of the entire project, including the construction of the DKW, the painting of the figure and the final finish of the two models can be found in my book, detailed at the top of this article.

—Mario Eens

# leichte Nebelk



# Kraftwagen 3t (Sd.Kfz. 11/4)

## "Smokin' haulin' rocketwagen"



The Sd.Kfz. 11 was a mainstay German prime mover for artillery such as the 75mm Pak 40, 10.5cm howitzer lFH18 and the 15cm SiG33 during WW2. The chassis shared many components with the Sd.Kfz. 251 Armored Personnel Carrier series. It came in five different models ranging from the Sd.Kfz. 11/1 to the Sd.Kfz 11/5. My subject, the Sd.Kfz. 11/4, was specifically designed to be a prime mover for the 15cm Nebelwerfer 41. The chassis and cab were pretty much the same as an early Sdk.Kfz.11/1, but the bed design was wider and carried a redesigned ammo locker. The locker stowed 36 rounds of ammunition for the six-barreled towed launcher. Production started in 1940 and there are a fair amount of early war photos available. From references, it looks like the wooden cab Sd.Kfz. 11/5 superceded this vehicle from around 1943.

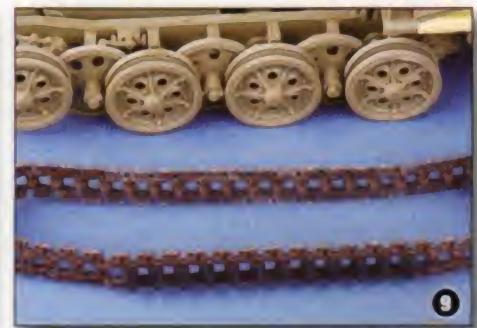
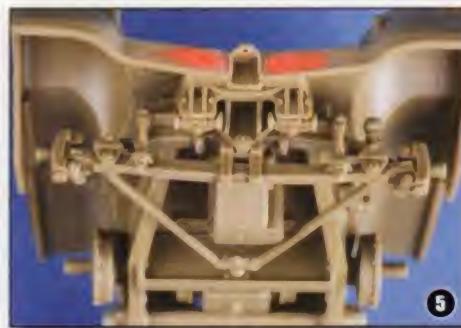
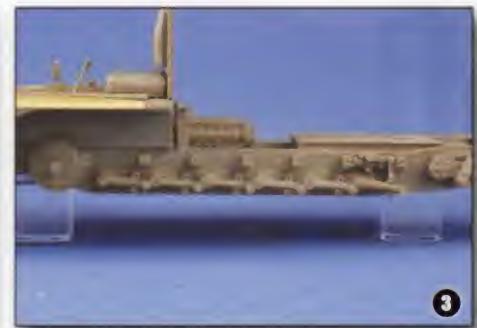
AFV Club has made the good old Sd.Kfz.11 in several versions for years now. They have an early Sdkfz 11/1, late Sd.Kfz 11/1 with wooden cab and bed (Einheitsfaherhaus), and the Sd.Kfz 11/4. The kit I use for this project is AFV Club 35S36, Nebelkraftwagen Sd.Kfz. 11/4 German 3-ton Semi Track. This is a special edition version of 35051 that includes sprues with four 28cm HE and four 32cm Incendiary rockets in crates like those used on the Sd.Kfz. 251 Stuka Zu Fuss, or a frame launcher. It also comes with some new markings and an extra paint guide. This special edition is now discontinued but AFV Club is re-releasing the original edition (35051) soon.

The kit has been sitting on the shelf for a bit. The box art always interested me. The real incentive to do this project comes with the release of the book *Sd.Kfz. for the Nebeltruppen* by Panzerwrecks and the arrival of an AFV Club "Touch" (TH35005) series photo-etch set. I also decide to add some link-to-link tracks from AFV Club (35044). In all, I have a unique subject with a pretty cool paint scheme, new reference, and aftermarket bling-bling. Sounds like a project...

### Add glue, please.

I start assembly by detailing the rear bumper. The boarding steps are from the touch photo-etch set. The chain is from the scrap box, the tow hitch pin is from a Dragon Sd.Kfz.251 kit and the small handle on the right side is stretched sprue. These bits will break off during construction and my advice to you is to wait until later to add them.

The frame and suspension parts are next. Everything fits really nice and true here. There are a few gaps to clean up but can't really be seen when the model is done unless it's displayed upside down. A transmission and fuel tank are included. These get hidden too. The drive sprockets for the half-track suspension fit together a little tight, so I trim them up and give the two halves a good squeeze before adding cement. I add valve stems cut from brass rod to the front tires and the spare tire. The front steering subassembly takes some clean up, as the sprue connections are thick. When I put it together, it's rigid and I can't pose the front wheels. The easiest fix to this is to cannibalize



balance the parts from a Dragon Sd.Kfz.251 kit as they can be positioned.

When it comes to adding the road wheels to the rear suspension, I leave off the outer layer to make painting easier. From there I add the cab floor (D27) and the front steering subassembly. There are some noticeable sink marks in the front bumper of part D27 that need filling. When I add the front steering subassembly, I ensure that it is perfectly level. There is a tendency in both this and the AFV Club Sd.Kfz. 251 kits for the right wheel to lift off the ground. I don't cement the front wheels in place in order to make painting easier, but I do test fit. Some photo-etch details are added for the cab floor from the "touch" set. These are all but invisible later but they were fun to install.

The kit-supplied tracks are a bit too long (two links or so on the left and three on the right) and they do not fit over the drive sprockets well. The link-to-link tracks (AFV Club 35044) take some cleanup and extra assembly work but I think they look better. These are built up right on the suspension. I do the top run first without adding the rubber track shoes then I add the rubber track shoes to the bottom run to ensure the model sits level. Finally, the shoes for the other parts of each run are added separately once I had the overall shape formed.

The front firewall is built stock. Overall detail is pretty nice. The oil tank on the right side needs some filler as it is split into two parts that have a slight mismatch.

At this point, I jump ahead in the instructions to step 20 and build the cargo bed. The compartment that carries the Nebelwerfer crew is a bit of a puzzle. I find

**1.** Details added to the rear bumper. In hindsight, this step should have been done last to avoid breakage. **2.** The frame builds up nice and solid. The transmission and fuel tank can't be seen later. **3.** AFV Club does good suspension. All this nice detail pretty much disappears too, but its there! **4.** Tire stems are added to all of the wheels using brass wire. **5.** The front steering assembly has been added. The steering is nicely detailed but can't be positioned. It is slightly cockeyed here. Sink marks on the front bumper are filled in. **6.** Some details are added to the cab using the touch set. **7.** The link-to-link tracks compared to the kit tracks. The link-to-link tracks are more work but they look better when done. **8** and **9.** The link-to-link tracks are formed around the suspension with the inner road wheels glued in place. The rubber track shoes are added to the bottom run first and then the other shoes are installed once the track shape is formed. **10.** The dashboard and front firewall are installed without modification. The oil tank needed some filler. **11.** There is a bit of filling and shimming needed to get the rear bed to look right. The rails on the Nebelwerfer

one interior view in *Nuts & Bolts* #20 and it looks like AFV Club followed this photo faithfully. The rails on the floor appear to be a vestige of the Sd.Kfz. 11/1 Nebelkraftwagen that was used to carry a 10cm mortar back in the crew compartment on a wheeled carriage.

Here is the puzzle: some in-action photos of the early model Sd.Kfz.11/4 show shovel mounts on the back doors and what looks to be racks for three Kar 98k rifles mounted just to the rear of each seat. The shovels are not included in the kit and there are no rifle racks. In fact, there really isn't room to put the rifle racks in without shortening the seats. Some other photos don't show these details at all. Hmm...

The main bed parts (K12, K12, Q25 and Q26) need a little filling and shimming to make the ammunition locker subassembly look like one unit.

There are some nice details back here. The rear and ammunition compartment doors are molded separately. I don't cement these in place until after painting as they break off easily. The ammunition locker itself comes with little end parts for the Nebelwerfer rocket canisters. Either the top or bottom end of the canister can be used. I put in the top ends (L9) on my locker. The details on top of the locker are where

I have the biggest beef about this kit. The spare wheel is really Jim-dandy, but the canvas tilt that covers the vehicle during inclement weather looks really square and chunky. I decide that I'll cover this area up with stowage and a tarp later on since it looks like that was pretty common in reference photos. I add some seams on the rear parts of Q25 and Q26 from thin styrene rod. A photo-etch rear license plate is included in the Touch set. Later in the project, I swap this out for a rectangular one from Elefant, as this style appears more common on this vehicle. Elefant is now defunct, but you can get the same item from Aber in kit no. 35A029. In step 24, I add the mud flaps. I use the photo-tech ones from the Touch set as they are thinner and I can bend them up a bit.

I double back to finish up the cab and the engine compartment. The engine compartment and front firewall go on with no problems. In step 16, I replace the windshield bump stop and front license plate with a photo-etch part. The windshield and cab sides are next. The windshield frame (D17) is all warped when it comes off of the sprue. I don't get spooked by this. When I put in the clear parts, it straightens right out. I leave the windshield off for later. The cab



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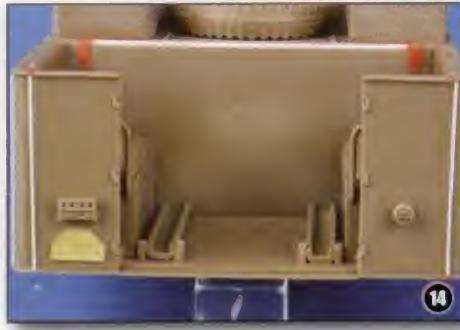
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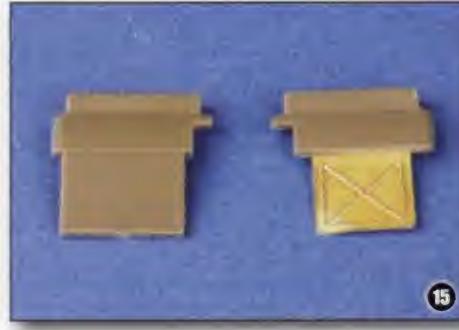
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crew compartment floor look like those used for the 10cm mortar in the Sd.Kfz 11/1 Nebelfahrzeug. 12. The canvas tilt is a square and chunky. I decide to cover this area up later. 13. The neatest detail on the bed is the ammo locker with the rocket canister ends. The top and bottom end of the canisters are provided. I put in the top ends. 14. I add some missing seam detail to the rear of the bed using thin styrene rod. The Touch license plate is later switched for a rectangular one. 15. The Touch mud flaps are thinner and look better overall. 16. The windshield frame is warped when removed from the sprue. Adding the clear parts straightens it out. 17. The Hanomag Emblem is the highlight of the Touch set for me. The kit supplies one for Borgward. 18. Other brass details in play include a bump stop for the windshield, a new license plate and Notek light mount. The brass chain on the front tow pintle is from the scrap box. 19. The cab interior, bed interior and suspension parts are all painted and then masked off before applying the camouflage. 20. Archer transfers dress up the dashboard nicely.

sides (K2 and K3) are a bit of a bummer. I would have liked to see opening doors here. There is actually no defined seam where the doors open and there are

some sink marks in these parts to fill. There is a gap in the rear part where the side panels meet the cab floor (D27). They actually don't fit all that well to the

front firewall either. I finish off the main body of the vehicle by adding a few details from the Touch set. The kit-supplied Borgward emblem is switched for the Hanomag one provided in the Touch set. Schwing! I also add a photo-etch Notek light mount from the aforementioned set and a chain for the front tow pintle from the scrap box.

The final construction steps take place after I put on the basic paint scheme, chipping and oil paint effects. The Jerrys used to like to ride dirty, so I leave the windshield down and give it a canvas cover. This is made with Apoxie Sculpt. A thin wire is used for the seam around the perimeter and paper strips for the retaining straps. The top of the ammo locker has a bunch of junk from the scrap box covered by an Apoxie Sculpt tarp.

#### **It will need color...**

I mentioned the extra decals and paint guide earlier. I decide to emulate the three-color scheme portrayed on the extra slip of paper thrown in the special edition and also add another wrinkle by making it



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**21.** One of the reasons I built this model is the box art. The three-color scheme is added using straight Tamiya colors over a dark brown undercoat. **22.** The front-end markings. They are for a vehicle from 2nd SS division at Kursk (Russia, Summer 1943). The kit decals shred during handling so I have to scrounge up new ones using Archer. **23.** The rectangular license plate is a discontinued item from Elefant, but one can be obtained from Aber. **24.** I add a bunch of stowage and a tarp made from Apoxie Sculpt

look like the vehicle was re-painted from the earlier German Grey.

The overall paint scheme is airbrushed using Tamiya acrylics. The interior and undercarriage are painted first in German Grey. Three shades are used.

An undercoat of XF1 Flat Black, a base coat of XF63 German Grey and then a highlight of XF24 Dark Grey are applied. The cab placards and instrument markings from Archer (AR35296) go on before I put on a thin coat of future to protect the paint.

over the ammo locker to hide the tilt. **25.** Chips are added with Vallejo. Oil paint effects are next, then some metallics. Pigments are added after a coat of Vallejo Matt Medium. **26.** The front end with the weathering added. I try to make sure the vehicle is nice and dirty without drowning the detail. **27.** The chips, washing and pigments give the rather Spartan bed area a little more spice.

The exterior three-color camouflage is applied using an undercoat of Dark Brown (Tamiya XF2, Flat Black and XF10, Flat Brown) followed by XF-60, Dark Yellow, XF67, NATO Green and XF10, Flat Brown. I paint the front wheel and the outside road wheels



Grey (70995) mixed with Sky Grey, then SS Camouflage Black Brown (822). For metallic effects, Citadel Miniatures Chain Mail (61-56), Mithril Silver (61-55) and a Prismacolor Metallic Silver pencil are applied. Oil paints are used for other washes and streaking. From the Winsor & Newton range: Yellow Ochre; Naples Yellow; Sap Green; Olive Green; Burnt Sienna; Burnt Umber; Raw Umber; Black; Paynes Grey and Titanium White go to work while Lukas Warm Grey and Beige are also key players. Turpenoid is used for thinning.

Before applying the pigments, I spray the whole thing down with Vallejo 70540, Matt Medium as a flat coat. I use the following Mig Pigments set with

Turpenoid: 023, Black Smoke; P024, Light Rust; P028, Europe Dust; P034, Russian Earth and P234, Rubble Dust.

#### Conclusion

The basic Sd.Kfz. 11 from AFV Club is a great kit. Some of the modification parts for the 11/4 version left me scratching my head a bit due to fit and detail issues, but it's the only kit out there of this subject. I had fun screwing around with the tracks and photo-etch. The re-issue of this kit will be very welcome so that now you can hitch that Great Wall 15cm Nebelwerfer up to something.

—Jeff Kleinhennz

Dark Yellow to give my 'track some zazz. The kit decals shred during handling, so I have to scrounge up new ones from the Archer line. License plate numbers (AR35047) and markings for the 2nd SS at Kursk (AR77006) go on followed by more future for the exterior. The windshield cover has a base coat of XF-49, Khaki sprayed on.

Detail painting is done with Vallejo paints. Metal parts like the muffler and tracks are given a coat of Panzer Aces 032, Dark Rust. The rocket canister ends are painted Vallejo Air 71081, Tank Dark Yellow and 70814, Camouflage Olive Green. Seats and tires get 70950, Black. The tarp is 70830 German Field Gray WWII and the tilt is 70874 Tan Earth.

#### Add dirt, Burt

The weathering is done in four basic stages: chipping, metallics, oil paint effects, and pigments. For the chips, I use Vallejo acrylics: Dark Yellow (70978) mixed with Sky Grey (70989), followed by German

## MMiR RECCE

**AFV Club Nebelkraftwagen Sd.Kfz. 11/4 German 3-ton Semi Track. Kit No. 35S36 (Discontinued but available again as 35051). Suggested Retail \$45.00. Graciously provided by AFV Club's U.S. Importer, Merit International.**

**AFV Club Sd.Kfz. 11 Track (Workable). Item Number 35011. Suggested Retail \$17.98.**

**AFV Club "Touch" WWII Sd.Kfz. 11/3T Half Track Early Version. Item No. TH35005. Suggested Retail \$8.95.**

**Archer Sd.Kfz. 11/4 Instruments and Placards. Item No. AR35296. Suggested Retail \$6.95. Graciously provided by Archer Fine Transfers.**

**Archer German WWII License Plates. Item No. AR35047. Suggested Retail \$11.95.**

**Archer Waffen SS Panzer/Panzer Grenadier Division Insignia. Item No. AR77006. Suggested Retail \$6.95.**

**Elefant German License Plates Waffen SS. Item No. 35.424. This is discontinued, so try Aber NO. 56A22.**

#### References

**Nuts & Bolts 20: Leichter Zugkraftwagen 3-ton and variants Hanomag/Borgward.** By Dr. Nicolaus Hettler Nuts & Bolt Verlag GbR, 2007.

**Sd.Kfz for the Nebeltruppen.** By William Auerbach and Thomas L. Jentz Panzerwrecks Publishing, 2009. ISBN 978-0-9841820-0-8 [www.panzerwrecks.com](http://www.panzerwrecks.com)

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# mittlere SPW Gerät



# It 920 "Uhu" (Sd.Kfz. 251/20)

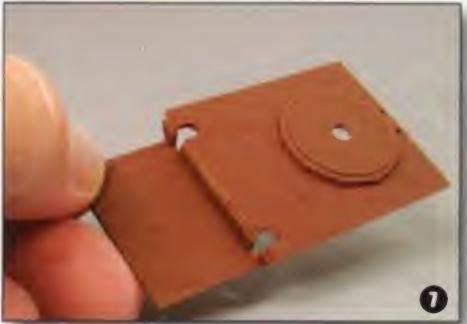


**"Uhu, where are you?"**

The Sd.Kfz. 251/20, Uhu (Owl) was introduced in late '44 but its development and that of its sister vehicles, the IR equipped Panther and Falke (Sd.Kfz. 251/1) go back to the summer of 1940 when the Heereswaffenamt (HWA) demonstrated the first generation of IR night fighting optics. Later in 1942, following heavy losses from Russian night attacks, testing began with the optics on weapons systems. The Panther Tank, then in development, was chosen to initially receive the IR optics as a means to increase their combat effectiveness and give them true night fighting capabilities. The tank's driver and commander positions were equipped with a 20 cm IR searchlight. However, these only had an effective range of about 400 meters. In order to increase their effective nighttime range, the Sd.Kfz. 251/20 was chosen for the role, incorporating the standard Luftwaffe 60 cm searchlight equipped with an IR filter, and the other optics for the driver and searchlight operator. The results were an increase in range for the IR equipped tanks from 400 to 1,500 meters. Operationally, each Uhu assigned could provide fire direction to the five IR Panthers in its platoon.

Modifying the donor 251's included adding the IR optics as already discussed, the 60 cm searchlight mounted in a retractable frame that could rotate a full 360 degrees, and the Fug5 radio set that allowed the Uhu to communicate with the tanks. Structurally, the floor of the 251 had to beefed up to handle the additional weight of the 60 cm searchlight and frame. In order to provide power to the light, the standard 8kv generator was mounted inside the crew compartment. Exhaust for the generator was run along the right inside wall and exited out the right stowage bins.

An initial order was placed for 600 Uhus, however records indicate that only about 60 were actually produced. It is not known exactly how many of these saw combat. Clearly a few did with good results. Like so many German weapons, had the hunter-killer combination of Uhus and IR equipped Panthers been employed extensively, who knows how much mayhem could have been wrought.



## Getting started

The AFV Club kit debuted in 2007 and continues to be the only Uhu in plastic available on the market. Previously, the venerable MB Models conversion for the Tamiya 251D was the best alternative to building this unique vehicle. Lucky for us, AFV Club knows what they are doing, as their 251 line of kits is excellent. AFV Club has achieved a reputation for producing very fine, (microscopic you might say) injection plastic parts, and the Uhu continues to deliver in this respect. Breakdown for the kit includes 10 sprues in dark green styrene, one sprue in clear styrene, the one-piece lower and upper hulls, a small photo-etch fret and two lengths of one-piece vinyl track.

What is not included from AFV Club are the 8Kv Generator, and some of the other small details on the searchlight and driver's compartment FuG5 radio. Blast Models has come to the rescue to round out the details with their update kit, BL35121K. The set adds 43 finely cast resin parts to the kit, including the missing generator and replacement IR searchlights for the driver and front end, as well as the optics for the driver and the searchlight

operator. So—what about the kit?

I approach this project like others and set out to build the kit in subassemblies. I first concentrate on the lower hull and assemble the floor, sidewalls and torsion arms as per the instructions. I also build all the wheels, but set them aside to paint and weather later. All this builds up quickly and allows me to move to the lower hull and searchlight in no time.

### Lower hull

The lower hull is a subassembly in itself comprising about 23 parts. The lower fighting compartment is a five-piece affair made up of the floor and side pieces and part U30 that makes up the idler support. The suspension parts are nicely cast, but there is a little clean-up required of some minor flash and mold seam. The torsion arms are installed as the directions indicate, however I leave the road wheels and tires off to paint and weather separately.

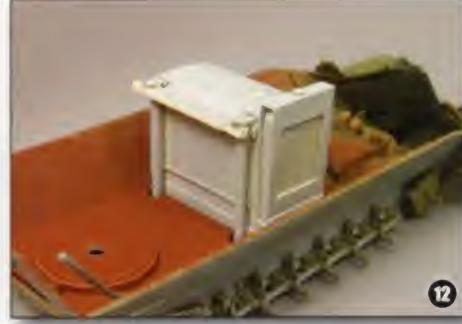
The searchlight is very nicely rendered consists of no less than 43 plastic and photo-etch parts alone, including a number of those microscopic plastic parts (in the form of single wing nuts), AFV Club has become so well known for.

Rather than pulling out the airbrush and chrome paint to create the mirrored interior of the searchlight, I choose to apply self-adhesive aluminum tape to the entire interior of the housing. After gluing both searchlight halves together and letting them dry overnight, I measure and cut the tape and insert it inside the searchlight housing. Using my finger, I gently press the tape around the inside of the housing walls. The soft aluminum conforms well to the cylindrical shape. Next using a circle template I cut a piece of tape to use for the rear reflector. Again, the soft tape conforms well to the concave shape and is a lot easier than spraying chrome paint. The truth is that once the IR lenses are applied to the front of the light, you can't tell what's inside, but I'll always know...

To create the IR lens, I decide not to use the clear styrene lens and instead use a clear red piece of Mylar from that aforementioned MB Models Uhu conversion. The film is cut to shape with the help of the kit lens and attached inside the pre-painted lens ring with white glue. The Mylar film is actually too red compared to photos of captured Uhus. To darken it up, I spray Tamiya Clear "Smoke" onto the

**1.** Rather than pulling out the airbrush and chrome paint to create the mirrored interior of the searchlight, I choose to apply self-adhesive aluminum tape to the entire interior of the housing. **2.** To create the IR lens, I use a clear red piece of Mylar. The film is cut to shape with the help of the kit lens and attached inside the pre-painted lens ring with white glue. **3.** The Mylar film is actually too red, so to darken it up, I spray Tamiya Clear "Smoke" onto the inside surfaces. Then, the photo-etch slats are added to the inside lens ring. The remainder of the light is then built up using the detail parts from the Blast update set and set aside to complete the support frame for the light and operator's station. **4.** The Y-shaped support structure goes together pretty easily. Some care is needed when you join the upper searchlight and frame and the lower frame together to ensure everything is lined up. **5.** I add a few details while I build up the

frames, namely the assorted wires and hoses that run along the inside of it. For these I use assorted sizes of lead solder, cut and fit into place. I also add eight hex nuts to the plate that mounts the support frame to the rotating floor. I use Plastruct hex rod for these and simply salami slice the nuts off the rod and attach them with Tamiya glue. **6.** Next I add the various detail parts from Blast to the frame including the new operators seat, communications box and traverse mechanism. **7.** Using a razor saw I cut the AFV floor at the top of its "step," leaving me with the lower floor area. I join what is now left and the Blast resin floor. The result is a smooth transition of the floor from front to back. **8.** **9.** At this point, the driver's IR equipment is added to the upper hull. Details of how the drivers IR Scope attached to the upper hull are sketchy. I use fine solder to replicate the wiring for driver's IR scope and searchlight.



**10, 11.** The Blast 8kv generator primed and ready. **12** ...and in place inside. **13** I first paint the generator dark grey. **14** Then I change my mind and paint it dark yellow. Many of the other interior parts are in evidence here. **15** One of two Archer sets in

action here, AR35310 for the instrument dials and placards. I also use AR 35266 for the Tetra Fire Extinguishers inside. **16** The interior cat walks getting the weathering love. **17, 18** Final assembly is progressing prior to buttoning up.

inside surfaces of the lens until I thought it looked right. Next the photo-etch slats are added to the inside lens ring, again attached with white glue. The remainder of the light is then built up using the detail parts from the Blast update set and set aside to complete the support frame for the light and operator's station.

*[Editor's note: The "Mylar" Tom mentions is actually a graphic arts masking product called "Rubylith." Before the advent of desktop publishing, it was used to mask photos for the printing process. It can probably still be found at Art Supply stores.]*

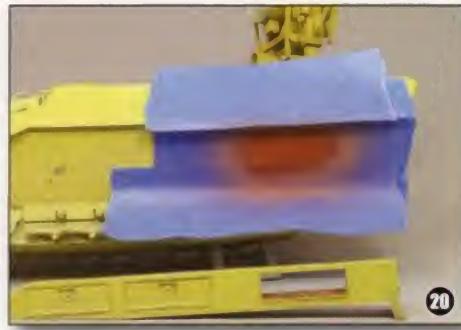
The Y-shaped support structure goes together pretty easily overall. Some care is needed when you join the upper searchlight and frame and the lower frame together to ensure everything is lined up. I add a few details while I build up the frames, namely the assorted wires and hoses that run along the inside of it. For these I use assorted sizes of lead solder, cut and fit into place. I also add eight hex nuts to the

plate that mounts the support frame to the rotating floor. I'm not completely sure they were there on the real thing, but staring at a fuzzy enlarged picture of a tiny bit of the floor convinced me there is something there joining the two together.

I use Plastruct hex rod for these and simply salami slice the nuts off the rod and attach them with Tamiya glue. Next I add the various detail parts from Blast to the frame including the new operators seat, communications box and traverse mechanism. With the light and frame pretty much done, I turn my attention back to the floor. Blast provides a replacement resin floor part to replace the AFV part. The instruction sheet from Blast indicates that this resin floor simply drops in place. However, this doesn't make a lot of sense to me, as it doesn't address what to do with the AFV floor—namely the portion that would have continued under the generator. Using a razor saw I cut the AFV part (L-18) at the top of its "step." This leaves me with the lower floor area.

Using CA glue, I join what is now left of part L-18 and the Blast resin floor. The result is a smooth transition of the floor from front to back. The light frame and searchlight are then added and the retaining ring (L-39) attached. The searchlight and floor are then set aside for painting.

At this point, I decide to add the driver's IR equipment to the upper hull. Details of how the drivers IR Scope attached to the upper hull are sketchy. Photographs appear to show it affixed to a frame suspended just off the hull. I use .20 copper wire to bend and form a reasonable frame that is soldered to a copper ring I form around some brass stock. This assembly is then glued to the bottom of the resin scope with CA glue and attached to the upper hull with another tiny drop of glue. I also use fine solder to replicate the wiring for driver's IR scope, searchlight and the Notek light.



### Crawling inside

Even without the searchlight and rotating mount in place, there is a lot going on inside. That means there is a lot of detail work to be done before I can glue the upper and lower hull halves together. Remember those 43 resin parts from Blast? Well, most of are meant for the interior including the 8kv generator radio, storage box for the IR devices, and new seat/stowage boxes that replace AFV Club parts (L-9).

Speaking of the generator, Blast provides a very complete replica. However, the Blast instructions are terrible as far as clearly describing what parts go where. Blast relies on photographs and a few rough drawings to show how the parts go together, but the photos are a bit overexposed and consequently not clear at all!

Here's where some good references come in handy. If you don't have either the Ryton book or Sturm und Drang, I suggest you download a copy of the excellent AFV Modeler #35, article from John Bailey on the Uhu. He has managed to find some excellent photographs of many details on the Uhu including some very useful shots of how the Blast generator parts should go together. These parts basically make up a small tread plate aft of the generator and its hardware. While discussing this, I need to state that AFV Club kit parts L-19 and L13

are not needed. These make up a roof section and aft wall that did not exist on the real Uhus. Because the AFV club Uhu kit shares sprues with other 251 kits, the correct roof plate can be found (N-17... I think, see photo).

I clean up the various resin interior parts including the new radio set, stowed tarp, stowage box, and generator, removing the over-pour and mold seams. The over-pour on the generator will take a while unless power disc sander is handy (it was not for me).

Next, I begin detail painting the interior parts including the forward firewall, radio, seats, generator and fire extinguishers. I use two Archer sets here, AR35310 for the instrument dials and placards, and AR 35266 for the Tetra Fire Extinguishers.

All the interior parts are individually painted and set aside to install at the appropriate time. I then paint the upper and lower hull shells using Vallejo Model-air Dark Yellow and a little white. Once these are dry I give everything a light wash using a mix of Mig Brown and Dark Wash.

Now I turn to paint the searchlight sub-assembly. This is also given a red-primer base coat followed by the same Vallejo mix mentioned above. Instead of the Brown and Dark washes I spray a filter made from a mix of Mig Neutral and brown wash to simulate a more weathered and heat distressed finish. Raised details are then picked out with the Mig Brown/Dark wash mix using a 000 brush. Small chips are added with a sponge using my favorite chipping paint, Vallejo German Camo Black-Brown. Prior to receiving the Vallejo dark yellow coat, a

**19.** I begin with a pre-shade basecoat of Vallejo Model Air black green-gray. A coat of Model Air dark yellow sprayed around the interior panels follows this. **20.** One of the side lockers is masked off and sprayed primer red just for fun. **21.** I use Vallejo Model Air Tank Green and spray this in irregular blotches over the hull. **22.** Next comes the dark brown, this time using Vallejo Model Air Tank Brown for the color. **23.** After each section of the track has cured I spray a base coat of Tamiya Dark Grey and Hull Red thinned with Tamiya Lacquer thinner onto each run. This is followed up with various shades of rust using the excellent Lifecolor Dust and Rust Set. **24.** Masking and painting the wheels. **25.** Washes, pigments, oils, oh my!

layer of hairspray is added to the floor sections. Once the dark yellow is dry, I distress the floor, exposing the red primer coat beneath.

I then add the firewall, seats, generator and the floor subassembly, and searchlight, as well as the two resin stowage boxes that go behind the searchlight on each side of the rear doors. I also glue the radio to the upper hull roof between the driver and co-drivers seats. With all that done I can now join the upper and lower halves together. Everything fit together very well. Only a few rubber bands and some paper masking tape are required to keep everything in alignment while the glue cures. It is only after everything has dried that I realize I neglected to install parts U24 & 25. With a roof, generator and searchlight in the way, it makes for a tricky endeavor to get them in and in the correct position, but with the help of some angled tweezers, I get it done. I add the exterior stowage boxes last and get ready for the last major phase: painting and final weathering!

### Time for final paint and detailing

Painting the Uhu is going to require a careful approach, after all I have a big searchlight and a fully painted and weathered interior to protect. To protect the interior, I use a piece of index card to provide a mask that will keep any overspray from the interior. This works perfectly. I begin with a pre-shade basecoat of Vallejo Model Air black green-gray. A coat of Model Air dark yellow sprayed around the interior panels follows this. This is immediately followed by a lightened shade of dark yellow mixed with a little white. Satisfied with the dark yellow base coat, I move on the other colors. Color plates from AFV Club and other references show the Uhu painted in a three color scheme of dark yellow, either chocolate brown or red brown and dark green. I opt for a more chocolate brown tone with the dark green. I use Vallejo Model Air Tank Green



and spray this in irregular blotches over the hull. Next comes the dark brown, this time using Vallejo Model Air Tank Brown for the color.

I let the paints dry completely overnight before the exterior is given a filter of Mig Tri-color filter sprayed through my airbrush.

After everything has dried overnight and I am satisfied with how everything is looking, I give the model a coat of Vallejo Satin Varnish to seal everything and lay down a smooth finish for the next phase of weathering: decals, detail washes and oil paint fading.

The two decals are a snap and are set in place with Solvaset decal solvent and left to dry. Now I start in with some oil paint fading. Working in small areas, I apply Mig Productions Abteilung oils in tiny random dots of faded dark yellow, olive green, buff, and wash brown. I work the dots into the finish with a round paintbrush wet (but not dripping) with Mig's Thinner for Washes. I gradually work my way around the exterior until I am satisfied. Then it is time to take a break and let everything dry completely overnight. When I come back to the workbench, I mix up some Mig Brown and Neutral wash and begin applying this with a 000 brush to the recessed panel lines and around all the raised detail.

Once the pin washes are dry, all that is left is to apply the pigment to the model and add the running gear and tracks. I have found that the most realistic effects can be achieved by mixing several shades of pigment together to get a more natural look. So I mix up several colors of Mig Pigments (Europe dust, light Europe dust, Russian earth and dry mud). To impart a dried-on look for the pigments on the lower hull, I set the model on its side and load an old paint brush up with the pigment and then tap the brush, letting the pigments fall into the surfaces. Going over some spots more than once allows the pigments to settle in different depths. Now, I break out the Thinner for

Washes again and load up a round brush and let capillary action draw the thinner into the pigments. This helps the pigment adhere to the model's surfaces. I continue this all around (working one side at a time) until I have gone all around the lower hull.

Next, I move to the upper surfaces and begin applying the pigments in thin layers. Some of these areas are worked more extensively with a thin paintbrush to impart a few streaked effects, before finally sealing the pigments in a coat of pigment fixer shot through my airbrush.

I can't use the rubber band track provided in the kit because of a slight tear in one of the track lengths. Instead, the editor sends me a set of Dragon 251, "Magic-Track." These fit perfectly over the drive sprocket without any modifications, although they do come with a pair of pesky knockout marks on the inside of each link that needs to be filled and sanded. After filling these, I use Tamiya thin cement, to assemble an upper and a lower track run for each side that will join together after the tracks are painted and weathered.

After each section of the track has cured I spray a base coat of Tamiya Dark Grey and Hull Red thinned with Tamiya Lacquer thinner onto each run. This is followed up with various shades of rust

using the excellent Lifecolor Dust and Rust Set. Using a small piece of sponge I apply each color of the rust colors gradually building up the effect I am looking for. Once satisfied with the results, I turn to the pigments I have used earlier and dust the sections in pigments. To make the various nooks and crannies of the track pop out a little more, I give the track sections a pin wash using Mig Dark Wash. Lastly, I spray each section with pigment fixer to set everything in place. The two track sections are then fit back over the road wheels and cemented together, and left to cure overnight.

#### **So color this Uhu done!**

This was a fun build from start to finish. As mentioned already, AFV Club produces some great kits and their 251 series is no exception. The Blast Uhu update set is very complete and easy to work with. It requires only a minimal clean up before using, mainly on the casting block of the generator. If you're new to working with resin conversions, or an old hand, this is a great project to tackle. If you haven't built a German subject in a while (like me), the 251 is a great vehicle to do to get yourself back in a German mood, and the Uhu is unique enough to make the experience even more fun and interesting.

—Tom Jett

## **MMiR RECCE**

**AFV Club 251/20 Uhu, #35116.** Graciously provided by AFV Club's U.S. Importer, Merv International. Suggested retail: \$50.00

**Blast Update set #BL35121K.** Suggested retail \$24.00.

#### **References**

*Schutzenpanzer Sd.Kfz 250 & 251*, Ryton Publishing.

*Sturm and Drang #3*, Tank Magazine Special.

*AFV Modeler #35*. Article can be downloaded for a small fee at [www.afvmodeller.com](http://www.afvmodeller.com)

# mittlere SPW (2cm)



# (n) Gerät 917 (Sd.Kfz. 251/17)

## "Luftwaffe Lowrider"



The Sd.Kfz.251/17 was the anti-aircraft gun modification of the widely used Sd.Kfz. 251 halftracks and was designed for the Hermann Göring Division based on the Ausf. C chassis. It had a platform installed in the original crew cabin to accommodate the 20mm Flak38 which had 360° rotation. The superstructure was also rebuilt with extended side panels that could be lowered to give the crew operating space. This way the gun could also be used against ground targets.

It appears that there were a total of ten Sd.Kfz.251 Ausf. C's converted for the Luftwaffe. All had the same extended sidewalls, but two were used as command vehicles and provided with frame antennas, while the remaining eight were equipped with the 20mm Flak gun. There were two troops with each one command vehicle and three anti-aircraft vehicles. The remaining two Flak halftracks must have been kept as a reserve.

The vehicles were painted Dunkelgrau with Balkenkreuzen on the sides, rear doors and engine deck. They carried the Hermann Göring clock sign on the left hand side of the engine deck and left hand rear door. Each halftrack also carried a number on both sides underneath the side vision ports.

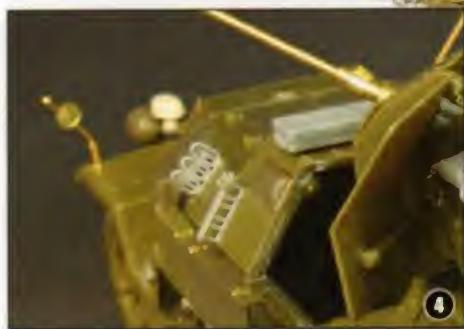
### The kit

Both Dragon and AFV Club have kits of this particular vehicle. I choose to build the latter one as AFV Club decided to use the fantastic Tristar Models 20mm Flak38.

The kit consists of 400+ parts in their usual olive drab plastic, including a small photo-etch fret. The standard of molding is excellent with almost no pin marks to be seen. The thin hull sides have details on both sides and nice bolt heads on the hull and fenders. The forward hull and engine compartment have been provided with realistic rendered weld seems. The hull interior is also nicely detailed, including the excellent tread plate pattern on the interior floor panels. The fit is very good with only some minor flash on some parts.

The only disadvantage of this kit is that it comes with the same full-length upper hull as with the previous kits. The side panels have to be cut at the joint line behind the side vision ports. This isn't that difficult. This kit also contains a new hull top section that needs some attention, as the fit to the hull is not very good. Some trimming is required at the side joints, but again this will only take a few minutes. I decide to replace the vinyl tracks from the kit with Friul tracks (ATL-07).

The Flak38 is a small kit on its own with beautiful rendered details and very thin armor plates



**1.** I choose to the AFV Club kit because they decide to use

the fantastic Tristar Models 20mm Flak38.

The standard of molding is excellent with almost no pin marks to be seen. The only thing really missing on the Flak is the shell ejection basket netting, which can be seen on pictures of the 251/17. I decide to produce my own using copper wire and some very fine plastic netting. 2. The forward hull and engine compartment have been provided with realistic rendered weld seams. The hull interior is nicely detailed, including the excellent tread plate pattern on the interior floor panels. 3. A nicely detailed Notek light from MIG productions is used. 4. The original Kar98 rifle racks on the hull sides are too thick; so I replace them with the ones from the Dragon kit. These are thinned down with a scalpel for a more realistic look. 5. The plastic gun barrel from the kit is replaced with the fantastic Aber 20mm Flak barrel.

with details on both sides with no pin marks at all. The only thing really missing on the Flak is the shell ejection basket netting, which can be seen on pictures of the 251/17. I decide to produce my own using copper wire and some very fine plastic netting (actually I did use the basket which I already made for my FlakPz. as I was running out of time, I'll make a new one for the FlakPz. after I finished the 251/17). The fantastic Aber 20mm Flak barrel (item 35L-86) takes the place of the plastic gun barrel. The original Kar98 rifle racks on the hull sides are too thick, so I replace them with the ones from the Dragon kit. These are thinned down with a scalpel for a more realistic look. A nicely detailed Notek light from MIG productions is used, as well as some nice looking wing nuts from WWII Productions. Aber tool clamps are used for better detail. I did find some brass width indicators in my spares box. I solder the rack for the jerry can at the back using thin brass sheet. The etched chains from the kit are replaced with more realistic Aber chains and I add some small details as a final step of the build, such as ammo cans and various accessories.

#### **Painting the Sd.Kfz.251/17**

The driver's compartment is airbrushed and weathered before assembly of the hull. The drop down hull side panels are kept apart for better

access during painting. The wheels, tracks and of course, the Flak, are also airbrushed and weathered separately. I first spray a thin layer of methanol onto the surface of the model to get rid of any fingerprints or other greasy spots. To attempt this method, be sure to wear the right personal protection and always use it outside or in a well ventilated room!

For airbrushing I like to use Tamiya acrylic paints, thinned down with their genuine lacquer thinner (the bottle with the yellow cap) at a ratio of 25% paint / 75% thinner. For general airbrushing I prefer my Harder & Steenbeck Infinity airbrush (compressor set at 14.5 psi), for finer airbrushing I grab my Iwata CM (spraying at 19-21 psi). Adding some 25% Clear (X-22) to my paint mix will result in an even smoother satin finish and thus avoid that often seen rough surface (especially when using Dark Yellow and German Grey).

I prefer to spray my models first with a light coat of Semi-gloss Black (X-18), which will not only serve as a base coat, but also as a last search for any irregularities in the surfaces. If so, this is the moment to make some last corrections with putty before airbrushing the actual layers.

I decide to build the overall Panzer Grey version, situated somewhere late in 1942. To avoid a dead monotone colored vehicle I will mix some blue into the grey paint to achieve a more realistic bluish grey

as often can be seen on WW2 color pictures.

Starting with a thin layer of German Grey (XF-63) I sprayed the whole model, being careful that the black will still shine through a little bit on the edges of the panels, acting as a pre-shading. This will serve as a first step of weathering/discoloring, which will give the model more depth without the use of dark washes. For the second layer, I make a mix of two parts Field Blue (XF-50) and one part Medium Grey (XF-18). Checking the consistency of the paint (25% paint / 75% thinner) I spray each panel separately starting at the center and working towards the outside, again paying attention not to completely cover the previous layer of German Grey. The third layer is sprayed using a mix of two parts Field Blue (XF-50), one part Medium Grey (XF-18) and one part Flesh (XF-15) and again reducing the area of each panel to be airbrushed. For the fourth and fifth layer I add some more flesh and white to the mix for highlighting those panels that receive more light from above. I also use this mix to add some rain marks in a random manor to the specific panels and to break up the panels even more. I don't worry about the harsh contrast at this moment; the upcoming filters will pull the colors together. Before applying the decals, I spray a layer of Clear (X-22). As the kit's decals are quite thick I use Balkenkreuzen from my spare box. Micro Set and



**6.** Starting with a thin layer of German Grey (XF-63) I sprayed the whole model, being careful that the black will still shine through a little bit on the edges of the panels, acting as a pre-shading. **7.** For the second layer, I make a mix of two parts Field Blue and one part Medium Grey. Checking the consistency of the paint I spray each panel separately starting at the center and working towards the outside, again paying attention not to completely cover the previous layer of German Grey. The third layer is sprayed using a mix of two parts Field Blue, one part Medium Grey and one part Flesh (XF-15). **8-10.** Before applying the decals, I spray a layer of clear. As the kit's decals are quite thick I use Balkenkreuzen from my spare box. Micro Set and Sol are used to adapt them to the surface, and after a drying time of two hours I again apply several thin layers of clear, this time only on top of the decals.

Sol are used to adapt them to the surface, and after a drying time of two hours I again apply several thin layers of clear, this time only on top of the decals. After drying I spray the whole model with satin varnish. I recently started to use a very nice satin varnish from Games Workshop that comes in a spray can. It can be sprayed in very thin layers and dries immediately. It is a perfect start for the next step: the filters and washes.

As a first step of the weathering process I apply several filters to the whole model to give it a worn look. I prefer Humbrol enamel paint thinned down with odorless White Spirit (you can also use the genuine Humbrol thinner) at a ratio of 5% paint / 95% thinner. Using a flat moistened brush (not soaked, otherwise it will act like a wash) this colored thinner is applied to the model. After three hours drying time, the next filter is applied. Some very nice colors to use as a filter on Panzer Grey are Humbrol Brick Red (70) followed by Orange (82) and Khaki drill (72). As a result, the panels with the harshest contrasts are pulled together.

The second stage of weathering are pin washes around all details using Vandyke Brown (403) and Sepia (416) oil paints to give the model more depth and to accentuate all those little details. I prefer the oil paints of the Rembrandt Series, produced by Talens, due to their very fine pigments.

The paint is thinned down approximately 20% paint / 80% thinner and applied with a 000 brush from the Winsor & Newton Series 7. It is important to wet the surface with thinner before the pin wash is added, otherwise the wash will not flow around the details, but rather spread all over the surface and darken the model. After a 24-hour drying time I add more dirt to the lower parts of the panels using local filters made of thinned down Van Dyck Brown, Burnt Sienna (411) and Permanent Madder Brown



(324) oil paint, the latter one ONLY very sparingly and well thinned down, after all I don't want my model to be covered with a lipstick red!

Chips are added in several passes using a mix of Payne's Grey (708), Naples Yellow Red (224) and Titanium White (644), each pass adding more and more white to the paint mix. To get some variation I make a primer red color using Permanent Madder Red and Nickel Titan Yellow Light (279) and apply it to the previous chips (a.k.a. the mapping technique). Some final chipping is added using Vallejo's



11



12



13



14

**11.** As a first step of the weathering process I apply several filters to the whole model to give it a worn look. I prefer Humbrol enamel paint thinned down with odorless White Spirit. **12.** Some very nice colors to use as a filter on Panzer Grey are Humbrol Brick Red followed by Orange and Khaki drill. As a result, the panels with the harshest contrasts are pulled together. **13.** Chips are added in several passes using a mix of Payne's Grey, Naples Yellow Red and Titanium White (644), each pass adding more and more white to the paint mix. **14.** To get some variation I make a primer red color using Permanent Madder Red and Nickel Titan Yellow Light (279) and apply it to the

previous chips (a.k.a. the mapping technique). Some final chipping is added using Vallejo's SS Camouflage Black Brown (822), my favorite color. Light scratches and scuff marks are applied, again using the previous colors. Tools etc. are hand painted using Vallejo Model Color. **15.** To complete the scene and to give the model a nice presentation, I create a small base. Roots and small stones from my garden are pushed into moist Polyfilla. The road is covered with fine sand and crushed cat litter. Along the sides, pieces of Wildgras from Heki are used. The vegetation is made from different kinds of static grass and Joesfix products.

SS Camouflage Black Brown (822), my favorite color. I try to add the chipping as random as possible and add them to logical places. Light scratches and scuff marks are applied, again using the previous colors. Tools etc. are hand painted using Vallejo Model Color.

Some dusting is applied only to strategic places to give the viewer the impression of a dusty looking vehicle, without completely covering the previous paint work. The first "layer" of dust is painted with Humbrol Khaki Drill (72). To obtain some variation, I make a mix of Vandyke Brown and Naples Yellow Deep (223) for the second layer.

The main reason I opt for oil paints is the long drying time. This gives me plenty of time for making any corrections.

There is no fixed sequence when it comes to weathering, I can always go back and forward between the previous steps. The result will be a nice model with lots of tonal variation to look at.

When all painting was done I add a small amount of pigments only to the lower part of the hull and running gear. I make a dry mix of MIG pigment powders (Dry Mud, Europe Dust, Beach Sand and Concrete) and apply this mix with a dry round brush. White Spirit is added carefully with a round brush to fix the powders to the surface by holding the soaked

brush against the edge of the panel, this way the thinner will flow all over the treated surface.

After spraying the tracks with an auto primer, they are airbrushed with a dark mix of Tamiya's Black (XF-1) and Brown (XF-64). The same mix of pigments as described above is dissolved using White Spirit and applied to the tracks with a flat brush. When dry, most of the pigment powders are brushed off, again using a flat stiffened (old) brush. Afterwards some graphite powder is applied to the tread. For the exhaust I use a mixture of Rust and Russian Earth MIG pigments, tonal variations are applied with thinned down oil paint.

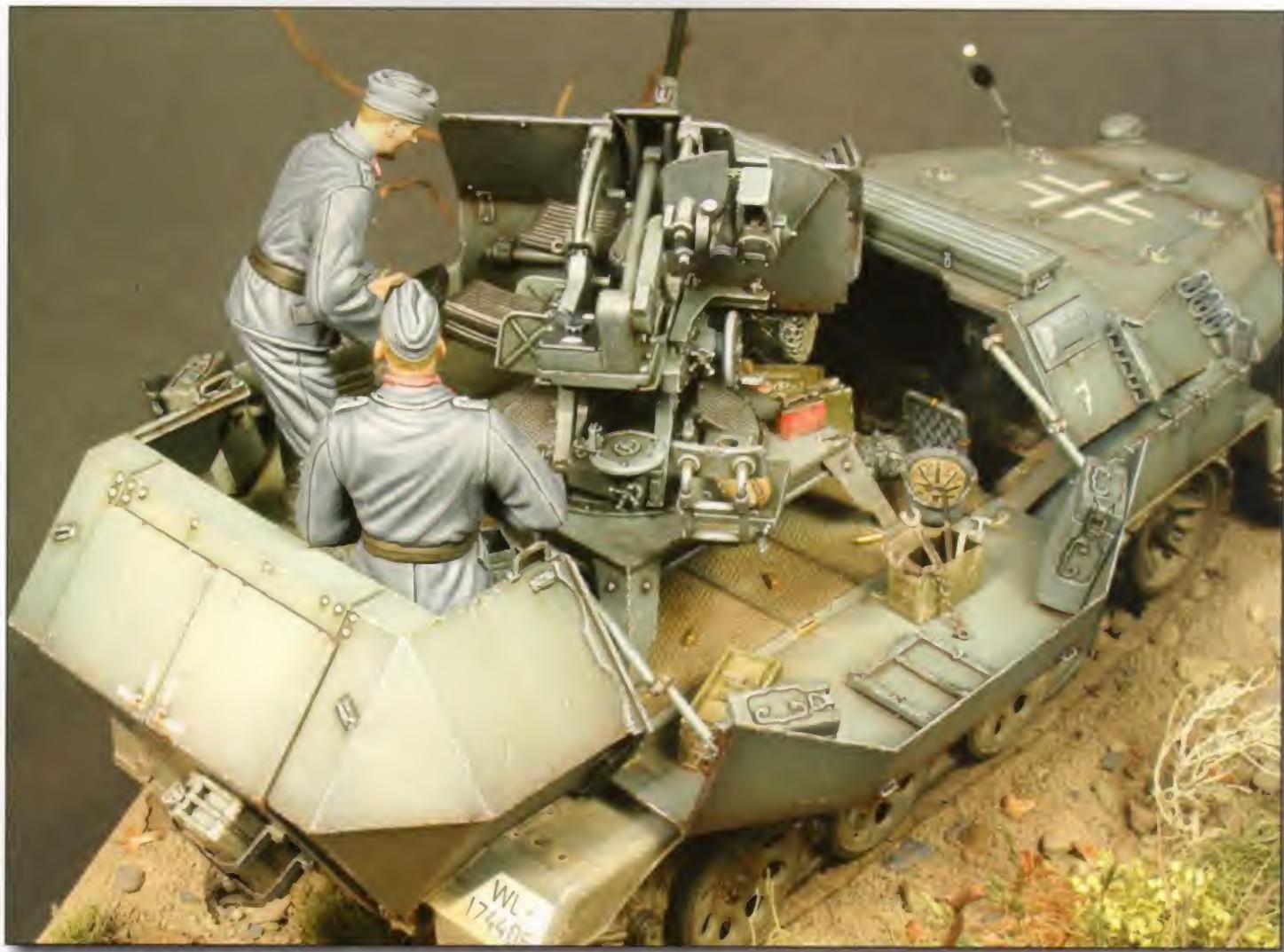
The FlaK is airbrushed, painted and weathered in the same way.

#### The figures

I decided to add two figures from Dragon's Flak Crew (6368). After clean up, using a scalpel and some very fine sandpaper, I change the heads in favor of Hornet items. The standing figure receives a scarf to



15



camouflage the rough transition between the head and torso. Both figures are painted completely with Vallejo. I really like the layer technique using acrylics as it gives full control without being concerned about drying time. Their Model Color range is quite extensive.

#### The groundwork

To complete the scene and to give the model a nice presentation, I create a small base. A piece of isolation foam is cut to the appropriate size and glued onto a wooden base plate. The foam is then covered with a thin layer of Polyfilla. Roots and small stones from my garden are then pushed into the Polyfilla. The road is covered with fine sand and crushed cat litter. Along the sides, pieces of Wildgras from Heki are used. The vegetation is made from different kinds of static grass and Joefix products. The model is placed on the base to create the track marks before the Polyfilla is completely dry. When done, the base is put aside to cure. The next day, I airbrush the surface with the appropriate earth colors. Grass is sprayed in different tones of green, again using Tamiya acrylics and MIG pigment powders. The small rocks are hand painted with Humbrol earth colors. I paint the sides of the base in Satin Black and finally a nameplate is printed as a finishing touch.

#### Conclusion

There are many roads that lead to Rome, and this is also the case concerning the interpretation of the German Grey color. This is only one of many

ways to create a colorful grey that doesn't have a dead and flat appearance. And maybe I have inspired you with this article to give it a go on your next German WWII vehicle. For myself I enjoyed every minute of it and I've learned some new

techniques, thanks to my friends at our club. In fact, I re-discover the pro's of using oil paints for my weathering techniques.

—Hugo Luyten

## MMiR RECCE

**AFV Club AF35118, Sd.Kfz.251/17 Ausf.C Luftwaffe version.** Suggested retail \$47.98. Graciously provided by AFV Club's U.S. Importer, Merit International.

**AFV Club AF35090, MG151 20mm shells.**

**Friulmodellismo ATL-07, Single link tracks for Sd.Kfz.251.**

**Aber 35L-86, German 2 cm L/65 gun barrel Flak 38; 35A16, Chains; 35A20, Movable Clamps and Clasps for German WWII vehicles and 35A69, German helmets chins traps.** WWII Productions 35009, Wing nuts.

**MIG Productions 35130, German NOTEK light.**

**Royal Model 247, German tank fire Extinguisher WWII.**

**Archer Fine Transfers AR35266, German WWII fire extinguisher placards.**

**Tristar 036, 20mm Ammunition and Accessories for Kwk/Flak 30/38.**

**Karaya TCM00, Towing cable.**

**LionRoar LAM006, German Field Maintenance Kits set.**

**PlusModel 152, Metal buckets and cans; 117, Ammunition and medical aid containers.**

**Dragon 6368, 2 cm Flak Crew.**

**Hornet HGH17, Heads with SS sidecaps. also for WWII Luftwaffe and Navy.**

#### References

215, *Sd.Kfz.251 (Wydawnictwo Militaria)*

346, *Sd.Kfz.251 (Wydawnictwo Militaria)*

*I would like to thank my fellow modelers from my club (KMK) for their ideas, advice, critical remarks and the good times we have together. My special thanks goes to Rudi Meir, Staf Snyers, Ron Soeren and Pascal Tognon for the interesting discussions about the Panzer Grey color, and to Eddy Willems for his very helpful advice concerning the Hermann Göring Division uniforms.*

# 8cm R-Vielfachwerfer



# r auf m gep (Zgkw S303 (f))

## "Strictly French propelled"



**G**enerally considered to be the better supplied and equipped branch of the German fighting units during the Second World War, it is not surprising that the SS initiated programs to develop weapons intended for their exclusive use. One such weapon was the 8cm Raketersprenggranate (8cm RSprgr.) or 8cm rocket developed from a projectile originally intended for aircraft use. The fin-stabilized rockets were cheaper and easier to manufacture than the existing spin-stabilized designs and used cheap launch rails. The delivery system itself bore a striking resemblance to the Russian "Katyusha" rockets using a rail launching system that could fire up to 48 rockets in one salvo. Maximum range of the 8 cm rocket was 5,796 yards (5,300 meters) with a velocity of 950 f/sec. A smoke version of the rocket was also used. Separate production lines were created to produce these rockets under SS control as the army refused to convert any of its existing factories to the production.

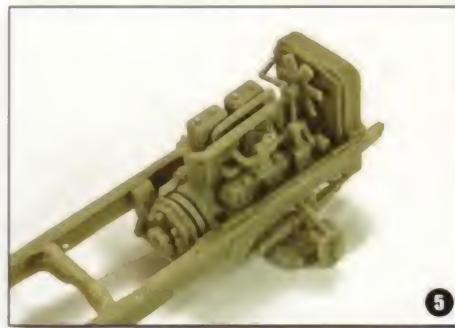
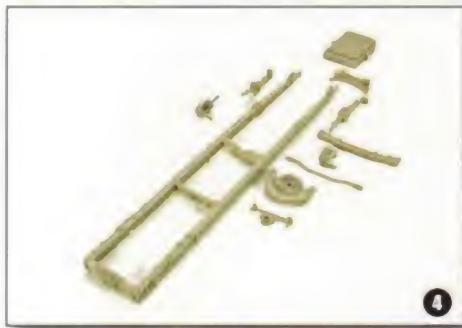
Although effective, it appears that actual production was very limited.

So having stated the above, the subject of this article today is, in fact, not an SS vehicle. Our little gem saw service with the Wehrmacht's 21st Panzer Division.

After being destroyed in North Africa, the 21st Panzer was reformed in June of 1943 in France. It remained stationed in France for the next year; being deemed unfit for service on the Eastern Front. During this time the division was re-fitted and re-equipped, primarily using captured French equipment. Information is unclear on how or why the 21st Panzer Division received them, but photographic evidence indicates that the 21st converted as many as sixteen of their Somua MCL halftracks into these mobile rocket launchers using the 8cm rocket system. The 21st Panzer was still in France when the Allies launched their invasion of Normandy in June of 1944, and the division was thrown into action against the Allied positions as the only Panzer unit to do so on the first day of the attack, June 6th.

### **Resin gold?**

Resin kit companies fill an important niche in the modeling world by offering us subjects that would otherwise be overlooked by mainstream manufacturers. This is certainly true of this release from the French company, DES Kit. Impressive in its name,



**1-3** I begin by assembling the engine. This provides a good indication of the level of fit and detail to be found on this kit. Unfortunately, most of the engine (except for the underside) will not be visible when the model is completed. **4** As one would expect, a good deal of time—and parts—are used on the chassis and suspension. **5** Dropping the engine onto the chassis frame confirmed that my parts placement is correct. As a matter of fact

the tight and proper fit of the engine is a real testament to the engineering of the kit. **6-7**. Now that I am really warmed-up, construction moves back toward the rear suspension where full three pages of the instructions are dedicated. **8** Time to add some tracks! **9**. Resin tracks can be a nightmare, but Des Kit makes these tracks almost foolproof by casting the drive/idler wheels and the section of track that wraps around them as a single

The 8 cm Raketenwerfer auf Somua MCL S303 shares many of the chassis and suspension parts from the company's earlier releases of the Somua halftrack. Although I have built many resin kits over the years, this is my first experience building a kit from this French manufacturer. Let's see what we've got.

Inside the box you will find a 13-page instruction packet and a number of zip bags containing a whole bunch of grey cast parts. The instructions are typical for resin kits with the assemblies presented by a number of black and white photographs and line drawings showing placement, along with a descriptive sequence along the margins. The casting of the parts is excellent with very few air holes, limited flash, and no warps. Resin kits, in general, tend to require a bit more attention than their styrene counterparts, so it is a good idea to study the instructions thoroughly and do a number of dry fits before reaching for the CA bottle.

#### OK, let's build

I begin by assembling the engine. This provides a good indication of the level of fit and detail to be found on this kit. I consider this a nice warm-up step, as most of the engine (except for the underside) will not be visible when the model is completed. As one would expect, a good deal of time—and parts—are used on the chassis and suspension. Now is a good time to settle down and focus on the task at hand.

The front part of the chassis assembly involves the securing a number of parts along the frame. On the frame are a number of locator points and notches onto which the corresponding parts are placed. The assembly photographs here are a little fuzzy, so I use this as a good time to practice my dry-fit skills to ensure that all of the parts get onto the proper spots. Dropping the engine onto the chassis frame confirmed that my parts placement is correct. As a matter of fact the tight and proper fit of the engine is a real testament to the engineering of the kit and a real boost of my confidence. This is going to be a nice model when completed. The front axle allows you to fix the front wheels at any position, which is a nice feature for final presentation.

Now that I am really warmed-up, construction moves back toward the rear suspension where full three pages of the instructions are dedicated. As with the forward areas, I am offered a number of black and white photographs that point out part placement. Again, test fit is the key here as there are many parts and some of the location points are somewhat vague. Along with the instruction photographs I mentioned a few paragraphs back, the instructions also contain assembly descriptions along the margins (left in French, right in English). Up until now I have only been looking at the pictures, so now is a good time to start paying attention to those words. The described sequences become increasingly important

here as the assembly becomes a little more involved. Some parts are mounted without gluing, while others must pass through one another—the words convey this, not the pictures. None of this is extremely difficult and really shouldn't pose too great of a problem to most builders. Once again, I take my time and test fit before gluing.

#### Road wheels and tracks, oh my!

Resin tracks can be wonderful—or not. So, when it comes time to tackle this area I am more than a little apprehensive. Heeding my own advice I spend a good deal of time first looking over the pictures—and yes—reading the words before I start to play with the parts. OK, here's the bottom line on these tracks; they are GREAT! Des Kit makes these tracks almost foolproof by casting the drive/idler wheels and the section of track that wraps around them as a single piece. No need to place and align single links around the wheels. The only thing to be mindful of is the alignment of the wheels themselves (again the words) in order for the upper and lower track lengths to attach properly. The placement of the road wheels is straightforward, as well. In very little time my half-track has tracks.

The cab assembly is next and proves to be very straightforward. Included within the cab are two seats, the dash panel, steering wheel, and control levers. Although due to the nature of this vehicle, lit-



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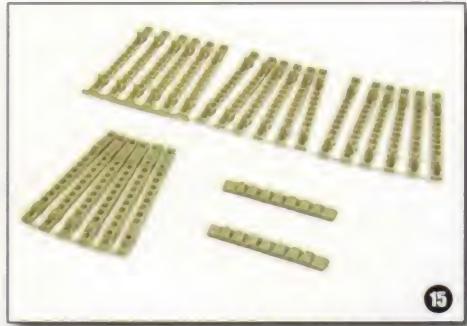
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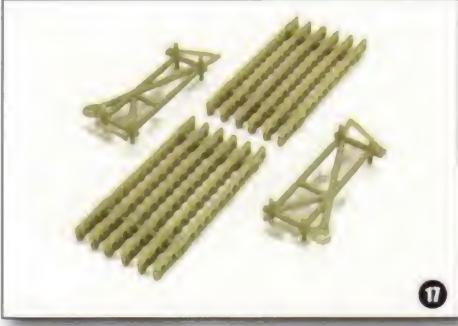
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**piece.** 10. The only thing to be mindful of is the alignment of the wheels themselves in order for the upper and lower track lengths to attach properly. 11. The result is simply brilliant! 12. Here's a final shot of the completed chassis. 13, 14. The cab assembly is next and proves to be very straightforward. Included within the cab are two seats, the dash panel, steering wheel, and control levers—little (if any) of this will be seen. The cab

and hood are cast as a single piece with nice weld and bolt detail. 15. The rocket rails. Once again, what could have been a nightmare of fiddling around trying to line up parts is made simple by the thoughtful inclusion of a small jig (seen at lower left). 16. I simply follow the rail orientation as called for in the instructions, place the rails on the jig, and glue. It's that easy. 17, 18. There are two layers of rails, attached with frames.

tle (if any) of this will be seen. The cab and hood are cast as a single piece with nice weld and bolt detail. I find the placement of parts 201 and 202 (left and right armored walls) to be the trickiest part of the cab assembly. Neither the picture or the words helps me with their orientation, so I spend a good deal of time fiddling with these parts until I make sense of it. It becomes clear to me once I dry fit them to the inside of the front fender wells. I was then able to see how they would attach to the frame.

#### I'm a Rocket Man

With the basic vehicle finished it was time to tackle the business end of this beast, the rocket rails. Once again, what could have been a nightmare of fiddling around trying to line up parts is made simple by the thoughtful inclusion of a small jig. I simply follow the rail orientation as called for in the instructions, place the rails on the jig, and glue. It's that easy. Firing cables are made from brass wire and solder. The small turret is easily constructed and only requires a few parts with the rail elevation determining the length of the piston rod, which is cut to size by the modeler. I add a set of headlight lenses that I find in my parts box and with that the vehicle is completed.

#### It's painting time

As near as I can tell from the few photographs

and color plates, the camouflage seems to be more in keeping with the French schemes rather than the typical German patterns. I decide that this vehicle would follow a similar theme, being painted with large green patches outlined by a thin brown edge over a dark yellow background. For the base yellow color I mix Tamiya XF-15, Flat Flesh with XF-60 and X-2 White, which results in a nice, rich color. Over this base layer I add some color fading by increasing the white to the mix, each time thinning the paints using Tamiya lacquer thinner. The narrow brown outlines are created freehand by airbrushing mix of XF-68, NATO Brown lightened with a little XF-57, Buff. Finally, the larger green spots are sprayed within the brown outlines using a mix of Tamiya XF-21, Sky mixed with XF-13, JA Green. The green patches are lightly over-sprayed by varying mixes of the green color to add depth.

#### Inclement weather (ing)

I begin the weathering process in earnest by applying a few thin washes of acrylic color. In this case, my paints are thinned to a consistency approaching dirty water that I then apply by brush over the entire model. This is also the time I will accomplish light chipping and scuffs using a fine brush. The acrylic washes applied over the chips have the nice effect of settling them into the surface. This process can be repeated to enhance the effect, or the colors changed

to highlight areas as I wish. I keep a damp brush nearby to feather out any water lines that may develop while the surface dries.

Once I have applied my base colors using the acrylic paints, I move onto using artist's oils. The first step is to enhance the shadowed areas by applying MIG Productions Shadow Brown into all of the corners, nooks, and crannies of the vehicle. I let this set for a few moments before feathering out the paint using a soft brush moistened with thinner. One this layer has dried (done quicker using a hairdryer) I am ready for another round of oils. This time I concentrate on enhancing the richness of the base colors by applying specific colors to certain areas. In this case I wish to add depth and richness to the base colors by using similar oil colored paints. For instance, the green spots are brushed using MIG Productions Faded Green and Green Grass while the yellow base color receives attention using Faded Dark Yellow and 3-Tone Fading. Again, a moistened brush is used to do the work and a hairdryer used to speed the drying process. Continuing with the oils I use German Ochre and Sunny Skin Tone for adding dirt and rain streaks and also lay a foundation color for the pigments by using a Basic Earth and Light Mud mixture.

#### Speaking of pigments!

When describing my work, I always try to stress that painting and weathering is not a linear process.



**19.** The small turret is easily constructed and only requires a few parts with the rail elevation determining the length of the piston rod, which is cut to size by the modeler. **20.** The completed rocket array. **21.** All done: naked version. **22.** All done: primer version. **23.** For the base yellow color I mix Tamiya XF-15, Flat Flesh with XF-60 and X-2 White. **24.** I add some color fading by increasing the white to the mix, each time thinning the paints using Tamiya lacquer thinner. **25.** The narrow brown outlines are created free-hand by airbrushing mix of XF-68, NATO Brown lightened with a little XF-57, Buff. **26.** The larger green spots are sprayed within the brown outlines using a mix of Tamiya XF-21, Sky mixed with XF-13, JA Green. **27.** I begin the weathering process in earnest by applying a few thin washes of acrylic color. **28.** Once I have applied my base colors

using the acrylic paints, I move onto using artist's oils. The first step is to enhance the shadowed areas by applying MIG Productions Shadow Brown into all of the corners, nooks, and crannies of the vehicle. **29.** I let this set for a few moments before feathering out the paint using a soft brush moistened with thinner. **30.** Generally, the pigments become a part of my weathering mix in the latter stages of the process. I prefer to apply my pigments wet, having first been dissolved in thinners. When I feel that I am heading in the right direction, I will permanently set the pigments in place using MIG Productions Fixer. The benefit of doing this is that I can continue to add layers without fear of disrupting my earlier work.



I will often jump back and forth between techniques; for instance from using oils to returning with a bit more of an acrylic wash and then back to oils. With this in mind, generally the pigments become a part of my weathering mix in the latter stages of the process. I prefer to apply my pigments wet, having first been dissolved in thinner. I feel that I have much more control when I apply the colors by simply "painting" the pigments. As with the previous steps the application of the pigments is a process of adding layers to create interest and depth. At certain times during the process when I feel that I am heading in the right direction, I will permanently set the pigments in place using MIG Productions Fixer. The benefit of doing this is that I can continue to add layers without fear of disrupting my earlier work.

#### Am I done?

At some point in this process I get the feeling that "I'm done;" at which time I will begin to take photographs of the model to see how it looks through the

lens. The camera is a great tool, it shows everything—good, bad, and everything in between. I almost always find areas that require additional attention. At some point both the eye and the camera come together in agreement and it's time to call the project complete.

Arguably, the Somua is not the most aesthetically pleasing vehicle to grace the battlefield. But, what it lacks in beauty it certainly makes up for in its quirky,

matter of fact, no-nonsense sensibilities. Slap a rocket launcher onto the back of one of these vehicles and you certainly have a historically unique and eye-catching vehicle to add to your modeling case. Although not a beginner kit, DES Kit did a wonderful job in both the engineering and casting of this kit making for a very enjoyable project.

—Rick Lawler

## MMiR RECCE

Des Kits 8-cm Raketenwerfer auf Somua MCL S303 (f) (1943/45). Kit Number 35125. Suggested Retail Price €124.00. Kit Graciously provided by the manufacturer. DES Kits are available in the U.S. through R&J Enterprises and The Red Lancers.

#### References

*Encyclopedia of German Tanks of World War Two, Revised Edition* by Peter Chamberlain and Hilary Doyle, Technical Editor Thomas L. Jentz. ISBN 1-85409-214-6. Just a few photos, but they are helpful.

# Saurer Grapes

The Eagle CZ Saurer RK-7, Sdkfz 254

(Mittlerer Gepanzerter Beobachtungskraftwagen)

Ah, to be in Vienna in the fall, or should we say just before the fall?



**T**he Anschluss of March 1938 may have had very little effect on the Austrian manufacturing base, but it did put into the hands of the German Army some very unusual vehicles, including the Saurer RK-7. Originally developed by the J. A. Maffei AG during the early 1930's, the Räder-Ketten design was used for both artillery tractors and self-propelled gun platforms. The advantage of this system when compared to removable overall tracks is that the vehicle could actually switch between wheels and tracks while in motion! The design phase of the RK-7 culminated in the testing of a prototype at the Kummingsdorf proving grounds. Even though the trials were successful, the German Army Weapons Office chose a half-track design on the grounds that it was more suitable for Blitzkrieg warfare. Austria, however, didn't have Blitzkrieg fever, and therefore maintained interest in this project. In fact, the Vienna firms Saurer and Austro-Daimler designed versions of the RK for the Austrian Army. Saurer developed the RR-

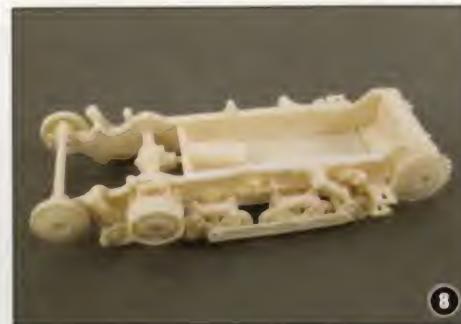
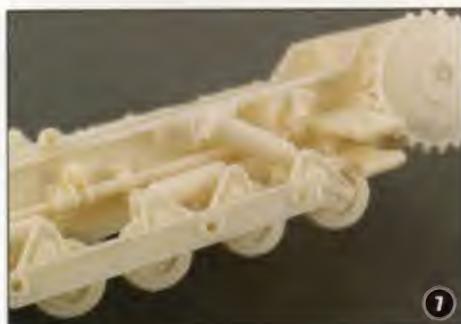
6 and RR-7, which were shorter than the RK and thus not viable SPG platforms. Trials took place in early 1937, and resulted in an order for 160 RR-7s. With the loss of Austrian independence in early 1938, however, the 15 completed units were delivered to the Germans rather than the Austrian Army. These units became werkstatt vehicles, but they so impressed the Heereswaffenamt that 150 more were ordered with armored bodies. These were built by Daimler-Benz and outfitted as armored artillery observation vehicles. Thus the RK-7 was born.

The RK-7 was issued to motorized or armored artillery units as spotter and reconnaissance vehicles. It carried a crew of five and was outfitted with either a FuSprf for local communications, or a combination of the FuSprf and a FuG4 and FuG8 radios (the FuSprf used a 2m antenna while the FuG4 and 8 both used a large, frame-type antenna). Powered by a four cylinder, 70 bhp water-cooled diesel engine, the RK-7 could reach speeds of 60 kph on wheels and 30 kph on tracks. It could change from

wheels to tracks at speeds of up to 40 kph. Its operational range was 400km on wheels and 90km on tracks. It carried just 20 gallons of fuel.

#### Recon reports in

I have wanted to build an RK-7 for some time, so when the editor offered me this project I jumped right on it. The kit is a multimedia affair, and includes 131 resin parts, a photo-etch fret from Eduard and a decal sheet for the 3rd Battery of the I Light Battalion of Panzerartillerie Regiment 119, which was part of the 11th Panzer Division. The instructions, unfortunately, appear to be photocopies of photocopies and are virtually useless. You need the Nuts & Bolts book on the subject to build this kit. According to the plans in the book, the model is too long, too wide, and too tall—but at least it's proportional. Truth be told, I don't even know if the book's plans are accurate. So where does that leave us? Who cares! This isn't a Tiger or a Sherman, after all. This vehicle is a rarity, and I am more than willing to settle for less-than-perfect accuracy.



**1.** The left rear retractable wheel. Note the wire replacing the pivot points. **2.** The tires and rims. The tires require a lot of sanding. **3.** The return rollers. This detail is not very sharp. **4.** The kit muffler with solder pipes fitted. **5.** Fruil tracks and jig to cut the

track pins **6.** The kit includes an Eduard photo-etch fret. **7.** The completed tracked suspension. **8.** The lower hull tub ready for the superstructure. **9.** This is my first experiment with Gator Glue, and I recommend it.

The quality of the castings is generally good. There is very little warping. The casting of the tracks, however, is so terrible that they are practically unusable. For a vehicle that features unique tracks, this is a particularly serious shortcoming. Overall the fit is only fair. The suspension's fit in particular is so awful that it drags the whole kit down. Additionally, the photo-etch parts are too soft, even without annealing, and the OVM clasps are seriously lacking in detail. While the decals provided are nice, I would like to have more of a variety of markings from which to choose.

So is there anything nice to say about this kit? Well, it is a fantastic subject, and I'm a sucker for oddities like this. It's just way to cool to let it linger on the shelf gathering dust. And, like most resin kits, some extra TLC can go a long way to make up for any defects and give you a great final product. So, overall I have to give this RK-7 a thumbs up.

#### Duck and cover

I begin construction by combining the upper and lower halves of the armored body (parts R1 and R2). The fit of these parts is great, requiring only a little Gunze Sangyo Mr. Surfacer to fill in some minor voids. To the left side of this subassembly I add the armored exhaust cover (R9). I move to the suspension next, which needs quite a bit of clean up. Fortunately there are no miscasts. The first step is to cement together the belly pan (R4) and the

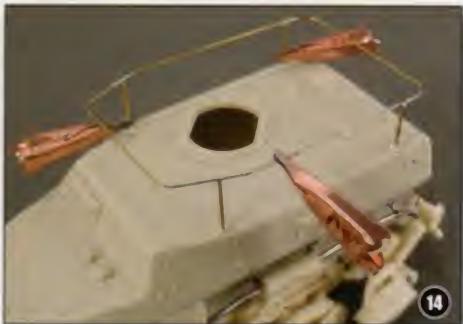
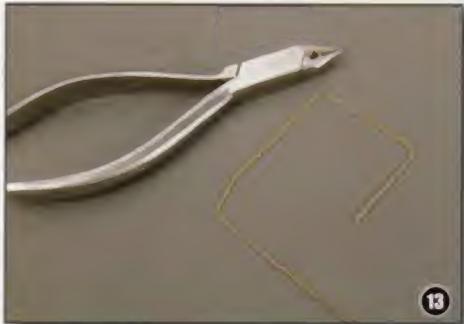
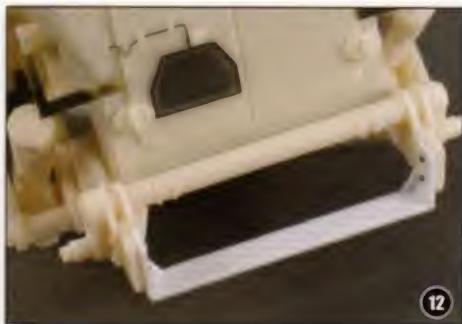
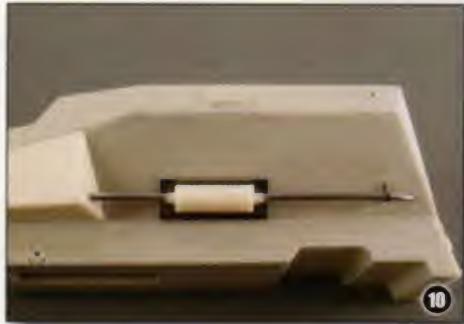
major frame elements (R5 and R6). Take some time to ensure that everything sits flat and level, or everything from this point forward will be out of whack. Although it is very tempting to cement the frame to the armored body at this point, DON'T DO IT! It will only make aligning and leveling the suspension even more difficult. Also be sure you are very clear about the placement of parts, as many of the suspension parts are mirror images of each other and must be used on the correct side. I start by assembling the left and right side two-wheel bogies, which are identical. The spring for each bogie (R40) should fit into the four dimples on parts R24 and R25. However, when you align the parts so that the springs sit level, the bogie wheel axles do not line up. You must decide either to line up the wheel axles and fudge the springs or vice versa. I choose to align the bogie wheels. To install the springs, I fill the locating dimples, trim the pins off the springs, and then superglue them into position. The results aren't pretty, but they'll have to do. I go through a similar process with the four single-wheeled bogie units, but I include a few additional steps to get the suspension aligned. At the point where the spring holders fit into the frame, I fill the locating holes and drill new ones higher up, then add a new male steel pin to the springs themselves, lower down. This is to prevent the fore and aft bogies from being too low relative to the center, double-wheeled bogies, which would then be too high by a good five millimeters. Note

that none of the bogie units have been glued to the frame yet.

Next up are the retractable wheels. To get a proper fit for these delicate parts, I need them to be somewhat workable. So, I replace the major pivot points on the rear wheels with steel pins at the intersection of parts R37 and R36. I also drill out the two locating holes for R36 in R16 to allow it to move more freely. The front wheels are much simpler, but be careful mounting R34 to the frame: the curved arm goes to the aft.

Once all the suspension sub-assemblies are ready, you can add the mechanisms that raise and lower the wheels. Make sure to test fit parts R43, R44 and R45 with the suspension arms, torsion bars and torsion arms (R46, R50 and R47). Once these are all in place, you can safely cement the bogie units to the frame. Again, ensure that the vehicle sits flat. Now you can permanently attach the armored body to the frame.

The remainder of the construction is quick and easy. First, I add the rear idler axle (R14), the lower glacis plate (R8), R41, and the armored air deflector (R11). You can add the rear tow hooks (R63 and R64) at any time. I leave off the front tow hooks (R62 and R63) until I am sure that everything else fits. I replace the muffler pipes with solder and add a dent to the muffler with my X-Acto knife. I have recently started using Gator Glue for photo-etch, which is acrylic based and has good tacking power. It does



**10**. The fit of the superstructure is perfect with no voids or bubbles. **11**. I ditch the kit's light bracket and replace it with wire. You'd have to be nuts to use resin here—it just screams, "Break me!" **12**. I make my own rear step—not difficult, but necessary.

**13**. I need the large frame antenna for this FuG vehicle. **14**. Radio shack clips hold everything in place for soldering. **15**, **16**. Aber clips replace those included in the kit. **17**, **18**. Tiny lead foil brackets hold the fender-mounted distance markers in place.

take a couple of hours to set completely, but once set it has a very strong yet slightly flexible bond.

To the rear of the vehicle I add the rear license plate, both taillight holders and some wiring. The rear Notek light and taillight are from the Tamiya OVM set. The provided photo-etch rear step is too small and thin, so I scratch build one from strip stock and some bolts shaved off a final drive cover that I find in my parts box. Moving around to the front, I replace the headlight supports with brass wire bent to shape—the included resin parts would never survive the build, let alone painting and weathering. Since I am modeling a FuG vehicle I need to add the large frame antenna. I make mine from bent brass wire soldered to brass wire supports, using the Nuts & Bolts book to get relative size and locations. I then cement this to the roof of the kit through some styrene punched disks and tubes, and add an antenna wire. Next I add the tools with Aber clasps, the 2m antenna and the directional semaphores. I decide to depict the vehicle with one smashed headlight, so I drill it out and add a light bulb base and wires. I replace the included resin vehicle crank with one made from wire and styrene. Getting the front armored shield in position is tricky, so take your time. I use slow-set superglue to give me enough time to position the part before the glue sets. Although RK-7s were equipped with fender-mounted distance markers, none are included in the kit. I decide to scratch build them using sewing pins and

lead foil for their brackets. The Notek driving light is from the excellent set by Mig Productions. I make light's bracket from thick strip brass.

To finish off the building phase, I add some clasps to the open hatch per my reference photographs, cement together the two halves of each wheel, add LionMarc screw heads and antenna, and assemble the tracks. Because the kit's tracks are a total loss, I use a set from Friul for the Panzer I. While these are not a perfect match, they are very close. The only real differences are that the RK-7's guide horns are bent out at an angle—an easy fix since the metal is so soft—and it has four "knobs" on the track face. This feature would be significantly more difficult to add, so I conveniently ignore it. I complete the picture with a DAK guy from Alpine.

#### Color my world RAL 8020

In my thirty-plus years as a modeler, I have never had the opportunity to paint a kit desert brown. It's about time, wouldn't you say? According to the instructions in Tamiya's Panzer III Ausf. N, RAL 8020 is a 3:1 mix of Tamiya XF-15 Flat Flesh to XF-64 Red Brown. But I'm getting ahead of myself. I prepare the kit for paint by removing the tracks and tires, then mounting it on a large styrene rod. I apply a base coat of Red Brown thinned 50 percent with Tamiya X-20 Acrylic Thinner and set the model aside to dry. On top of this base, I apply the first coat of the 8020 mix, allowing some of the Red Brown base to show

through around the panel edges and below the vision ports. I also apply a thinner layer to the lower and shaded areas. Again, I let this dry over night.

The next day, I post shade by adding five percent white to the 8020 mix and re-thinning it. To make it appear as though the vehicle is lit from above, I concentrate the post shading more on the horizontal surfaces. I use my Iwata Sub-Micron to give those areas that will receive markings (except for the Balkenkreuz) a quick coat of Tamiya XF-69 German Gray. This airbrush provides an exceptionally high level of control. After the German Gray sets, I apply the markings. The Balkenkreuz and front tactical marking are from Archer, the rear tactical marking is included in the kit (although I give it a new battery number), and the divisional markings and DAK palms are left over from Dragon's PzKpfw IV Ausf. E. Because I am modeling a specific vehicle, I make the license plates in Paint Shop Pro. I turn again to my Sub-Micron to over paint the dark gray areas. I do this quickly and none too neatly so that it appears that the markings were not masked when the vehicles were hastily camouflaged with a coat of desert brown over the original dark gray. To seal all the markings and prepare the model for filters, I give it a quick coat of Johnson's Future Floor Wax. For this project I decide to try something new: instead of mixing my own filters, I use Mig Production's Afrika Korps Filter Set. The set contains three premixed and pre-thinned colors—just



**19.** I add some scratch brass to the hatch interiors. **20.** I add a Tamiya rear convoy light. I shave off the bolts then re-cement them to the rear of the bracket and add a wire. **21.** Accidents happen. I imagine it was hard to see out of this thing, so look out!

**22.** The antenna wire is in the wrong place—nobody's perfect! **23.** This Alpine Miniatures figure is a perfect fit. **24-26.** Construction is complete. **27.** The model with its basecoat and first layer of paint.

shake and apply. I use all three shades on different areas to give the kit some tonal variation, and I am pleased to report that they work extremely well.

#### I'm not gonna paint by the numbers

Now for the details. I give the wooden parts of the tools a base coat of tan acrylic, followed by an over coat of burnt umber oil paint straight from the tube. I let this set for 20 minutes, and then wipe it off with a flat brush dampened with turpenoid. The metal parts get a black gray undercoat and a buffing with graphite. The tail end of the vehicle looked a little naked, and since this is a family magazine I decide to cover it up with a Magic Sculp tarp. I give the tarp a base coat of black green, then highlight and shadow it by adding dark gray and tan. I paint the inside of the broken headlight with silver leaf from Amaco, and the taillights and Notek convoy light with Tamiya X-22 Clear over silver. I add chips with dark gray, red oxide and flat flesh. To tone these down a touch I add one more very thin filter, a mixture of warm gray and cad yellow in turpenoid. The road wheels receive multiple thin coats of Flouquil Dull Black mixed with permanent white oils and thinned with lacquer thinner. The tow cable gets a base coat of flat black, then a rub of SnJ aluminum powder. I also use this powder, along with powdered graphite, on the idler, return rollers and drive sprockets.

Now that I've attended to all the details, I add

dark brown pin washes to the lower areas, the suspension and around the hatches. I also add some very light rain streaks—not too much rain in the desert!—and force fade the hull top and engine deck with white oil paint. I weather the muffler and exhaust pipes with a combination of rust colored oils, acrylics, Prismacolor colored pencils, and pigments. I surface treat the assembled Friul tracks with a sand blaster, dip them into Blacken-It, and finally clean them off in a mild soapy solution. I polish the track cleats with emery cloth and the internal links between the guide horns with SnJ aluminum powder and a paper cone. I use black oil paint thinned with turpenoid to apply grease stains to the engine deck and working parts of the suspension. Building these up in layers during the weathering process makes some stains look older than others. I apply desert sand colored pigments mixed with acrylic thinner to the suspension areas and lower hull. After the pigments dry, I scrub most of them off with a stiff bristle brush, leaving them only in the nooks and crannies. I give these same areas an oil wash of permanent white mixed with warm grey and turpenoid to accent dust accumulations even more. Over this I add some more brown and black pin washes to the movable suspension parts.

Getting tired? I hope not—it's tire time! The tires are base coated in Tamiya XF-69 NATO Black, and then given a coat of desert sand pigments mixed with oil paints. Before this coat sets, I wipe off the

excess to reveal the worn tread pattern. After mounting the tires to the hubs I give them a dusting with Vallejo 045 US Army Light Gray, then scuff them with a green kitchen scrubby. Be careful with these bad boys—while scrubbing away I knock the kit right off its stand! Luckily I manage to catch it before it hits the floor, but very unluckily I knock off the front Notek light ... and hear a terrible crunch as I roll over it with my chair caster. Deep breath. Everything's going to be just fine. It's back to the parts box for me, where I happen to have a whole bag of Mig Notek lights. This go round I paint it dark grey. There's no way I'll be able to get even a close color match to the rest of the model, so I might as well add some contrast.

With the base vehicle finished, I add some items to give it a lived-in look: water bottles, gas mask containers and helmets from Tamiya; a jerrycan from Tasca; and desert water containers from Dragon. I paint all of these varying shades of Vallejo 977 Desert Yellow mixed with US Light Gray, give them filters using Mig's Afrika set, and chip them with Tamiya XF-16 Flat Aluminum and German Gray. I attach them to the kit with some super thin wire from a fly-fishing store. Per my reference photos, I drape some spare track along the front edge of the engine deck. It actually engages the engine hatch stop very well, which I assume it did on the real deal since I see no form of attachment wires or bolts in any of my photographs.



28



29



30



31



32

**28** I use a dark base coat as a pre shade and fill in the center of panels with successively lighter colors. **29** The model with two more lighter layers. **30** The decals are in place and first filter is applied. **31** The Magic Sculp tarp. **32** Two more filters, some chipping, staining and streaking later. This photo represents about two painting sessions.

#### Go figure

Alpine Miniatures produces some of the nicest resin figures on the market today. I especially like those with a DAK theme. For this project, Taesung was kind enough to send me a DAK Panzer NCO. The figure comes in six parts: the body, both hands holding a set of binoculars, two arms, and two heads. One head wears a tropical field cap, while the other has a forage cap. I superglue the arms to the body but leave the hands and head separate for now. I prime the figure with flat black acrylic, and then give it a heavy drybrushing of white. My idea was that this would work like a pre-shade, but I'm not sure it really made any difference in the end. I use Vallejo Model Air and Model Color to paint the figure, using both the wet on wet and the wet over dry methods to blend colors for my shadows and highlights. The trouser's base color is 924 Russian Uniform WWII. It is highlighted with 009 Duck Egg Green and shadowed with 052 German Gray. The coat's base color is 023 Hemp; it is highlighted with US Light Gray and shadowed with 035 Came Light Brown. To really pull out some contrast I add a very thin dark grey pin wash to the junction between the trousers and coat, around the buttons and the scarf. All the insignia are so well sculpted that it is a breeze to hand paint them.

To finish things off I add a North African map, a pair of sunglasses, and a MP40 with two spare clips to the Saurer's roof, and then install the completed figure.

Wow—that took me like ten times longer than I thought it would! I was really hot to do this project



**33** I use Vallejo paints on the figure. These are the colors that make up the uniform. **34, 35**. The finished figure. I really pushed the highlights to account for a desert environment. **36**. Storage added to the right side. I really beat things up. **37**. More well used equipment. **38**. Oil and fuel stains, accomplished with oil paints and linseed oil. **39**. The map is from Dio-Art; the sunglasses are from VLS TechStar; and the MP and clips are from Dragon's StuG kit.



**36**



**37**



**38**



**39**

in the beginning, turned ice-cold midway through, but was back to steaming hot by the end. This is a difficult project. It is not for the timid, but with some perseverance you can get great results. There is an inbound styrene version of this vehicle, so if you want to build an RK-7 you won't have to bite the bullet and push this resin kit as far as it will go. Either way, in the end you will be happy you did, because this is a great subject.

—John Steinman, DMD

## MMiR RECCE

Eagle CZ Saurer RK-7 (Sd.Kfz.254). Kit number V35C111. Suggested retail price \$219.99.

Alpine Miniatures DAK Panzer NCO. Set number 35017. Suggested retail price \$17.95.

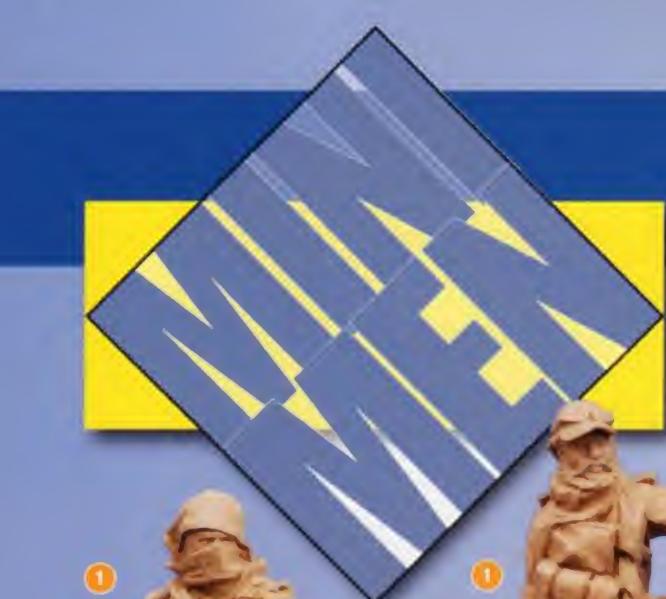
Friulmodellismo PzKpfw I/Maultier track. Set number ATL-20. Suggested retail price €27.00.

Adlers Nest 2m antenna. Set number ANM-35008. Suggested retail price \$16.99.

### Reference

Nuts & Bolts Vol. 05: Saurer RK-7 (Sd.Kfz. 254) by John L. Rue et al. Nuts & Bolts, 1996. Suggested retail price €7.95.

# A PEEK AT WHAT'S NEW ON THE FIGURE FRONT



## AC Models

So, you need to put some butts in the seats of your new Bronco Humvee, huh? **35002, Special Forces Humvee Crew Afghanistan** (1) may be just the ticket. We think they would also look good in the Pro Art War Pig LMTV conversion. We liked the bearded guys with the Oakley sunglasses a lot. This trio is very easy to construct as you just add an arm to each of the bearded guys and then glue on the ball cap for that figure. There is a little cleanup for each and you'll have to find weapons elsewhere, but this should pose no problem as the Bronco Humvees come with personal weapons. AC Models has a new website at [www.acmodels.co.nz](http://www.acmodels.co.nz).

## Alpine

Alpine has been going like gangbusters lately and we have a lot of catching up to do, but we're running as fast as we can. Let's get started with some Russians. **35117, Russian AFV Crew 44/45 #1** (2) wears the standard issue black leather winter jacket over his one-piece coverall. You have a head choice between the pictured leather crash helmet and the officer's peaked cap. **35118, Russian AFV Crew 44/45 #2** (3) is outfitted in an identical fashion, but the two heads included feature either a side cap with dust goggles (as seen here) or the crash helmet. The one-piece tanker's coverall was made in a few different shades (black, blue, grey and khaki) so you can vary the color a bit. Both figures come in a set as **35119, Russian AFV Crew 44/45 Set**.

**35120, Michael Wittman 1944** (4) is a portrait figure of that famous tank ace as seen in propaganda photos from Normandy in 1944. He wears the now famous U-boat jacket that the SS tankers loved so much. You can fill the collar with one of two heads. One wears the SS officer's cap and the other the Bergemutze. Mikey seems kinda sad at times. Maybe he needs a friend to play with: **35121, Balthasar "Bobby" Woll 1944** (5). Woll was Wittman's gunner and was said to be a legendary shot that could even shoot accurately on the move. This was no mean feat in the days before gyro-stabilized guns. He wears the late war SS version of the famous German tanker uniform that came in the "pea pattern" camouflage. The figure includes one head with a side cap and another with an officer's cap. The two come together as **35122, Tiger Aces in Normandy**.

**35123, WW2 Italian AFV Officer** (6) is kitted out for North Africa in the Sahariana blouse, flared trousers and officer's high boots. That itty-bitty holster is for his Beretta M1934 9mm pistol. The bustina cap that he wears comes with a detachable visor, so the alternate head has the visor on.

**35125 DAK Fallschirmjager #2** (7) is also from the North African Theater. One of his heads features the M37 parachutist helmet and the other the overseas side cap. Some other distinctive uniform features are the tropical trousers with the thigh pocket and the Fallschirmjager ammo bandoleer.

While all of the 1:35 scale figures from Alpine are

yummy and go together with no problems, the real beauty has to be their 1:16 scale GI, 16012, BAR Gunner US 29th Infantry Division (8). The head choice is between one with the M1 helmet featuring camouflage netting as shown here, or without the netting. His uniform consists of the OD combat jacket and the herringbone twill trousers. The M1937 automatic rifleman's belt held a total of twelve magazines. A distinctive feature of this figure is that he appears to be wearing jump boots. The pose is wonderfully executed and it probably comes from a famous picture of a BAR Gunner covering some surrendering Germans emerging from a cellar.

### Bravo 6

Bravo 6 is the 'Nam. Get it? Got it? Good. 35009, U.S. Mech. Infantry (2) Bros. NAM '68 (9) is a pair of US Army guys taking it easy and passing a spleef (spleef not pictured). They wear the standard OD green jungle fatigues and the M1956 Load Bearing Equipment webbing. Although the molded on shoulder flashes are for the 25th Infantry Division, decal insignia for other formations are included as are M16 rifles and M1 helmets for each figure.

35024, U.S. Navy SEALS (3) Vietnam (10) features one badass carrying another wounded badass. The wounded guy wears a camouflage beret seen in some period photos along with a rather interesting grenadier vest. His weapon is an M16 with an XM-148 mounted underneath. This weapon system eventually evolved into the M16/M203 that replaced the M79 grenade launcher. The carrying fella must be one strong SOB as he not only carries his fallen comrade but a 24-pound M60 machine gun one-handed. Think Rambo. Some distinctive features of this figure are that he wears a life preserver and blue jeans.

Bravo 6 keeps on pumping out devil dogs like there's no tomorrow, so we have three new sets to show you. 35035, U.S.M.C. (7) Corpsman & WIA Tet '68 (11) includes a Navy Corpsman tending to a wounded grunt lying on his back. The wounded guy is a rather grisly masterpiece that is composed of only two pieces. Just glue on the left arm and you're done. 35036, U.S.M.C. (8) Fallen Comrade Tet '68 (12) has one Marine dragging his wounded comrade to safety. The ammo bandoleer on the standing figure could do with some adjustment. Try dipping it in some hot water and then bending it into shape. 35037, U.S.M.C. (9) Baitin' the Hook Tet '68 (13) is a duo trying to draw out a sharpshooter. We really liked this concept. The hands on the prone figure are a little hard to line up as they are molded into the rifle. The uniform detail on all of the Marine figures was spot-on and as usual there are rifles, helmets and extra grenades included for each figure even if they are not pictured here.



GOD WILLIN'  
AND THE RIVER  
DON'T RISE!

14



15



15



15



15



15



16



16



16



CIGARETTES WILL  
MAKE YOU HAPPY  
LIKE ME!

The last figure that we present from Bravo 6 in this Mini Men is 35040, U.S. Army Special Forces Officer NAM (14). This guy looks just like John Wayne from the 1968 film, The Green Berets. Weird, huh? Probably just a coincidence...

### Bronco

Bronco has come up with a way to man either one of their two towed 17pdr kits. CB35087, British 17 PDR Anti-Tank Gun Crew Set (15) includes five figures in the British Serge Battledress Uniform seen throughout Northern Europe and Italy. The molding on these figures was fairly good for styrene and assembly presents no problems. There are insignia decals included for the 50th (Northumbrian) Infantry Division, a nice touch. Ammunition is not included, but there is a sprue with some weapons and equipment that we have seen in some of the Bronco British armored car kits.

### Dragon

It seems like no matter what the competition does, Dragon continues to lead the styrene figure pack by a nose. For instance, 6648 Panzergrenadier Arnhem 1944 (16) does not seem to be anything special at first. It's just four SS dudes lounging around, waiting for their shift to end so they can grab some schnitzel and beers. Then again, take a look at the two wounded tankers. There are some gaps in the legs but the portraiture here is damn good. They honestly look like they've had a really rough day. That grinning goofball officer with the smokes seems to be more of an annoyance than anything else. It's a nice little story. Uniform details are spot on, from the infantryman's second pattern camouflage smock to the seam work on the tank crewmen's trousers. Yes, we really liked this set.

The second offering we take a look at is 6652, Ostfront Winter Combatants (17). This is another one of the survey sets that Dragon has been doing lately that supplies the modeler with a sampling of soldiers in different uniforms. We can see these turning into decent individual display figures with a little work, or being used one at a time for scale effect in front of your latest vehicle project. The first figure is a Fallschirmjager dressed in the Luftwaffe's distinctive quilted winter suit. The second figure with the flare gun is a Wehrmact type wearing the iconic greatcoat. We noticed that the box art showed the MP40 submachine gun with the buttstock extended for both figures, but there are actually only parts for one in that configuration. As for the Soviet figures, the first one wears a padded telegroika jacket and carries a PPSh Submachine gun while the other wears the 1941 model winter field dress and carries a Moisin 1891/1907 carbine. There are two sprues of Gen2 gear included, but it's all German stuff and there aren't any Russki extras.

### Master Box

Master Box knows that not a day goes by when

you don't need a 1:35 scale cow or goat. **3566**, **Domestic Animals (18)**, is a simple enough set. You get TWO cows and a goat. These animals need some filler but you can't beat the value. Most resin live-stock comes packaged one at a time for the same price. Paint 'em up however you like—it's your set.

We like our cows in splinter pattern and our goats in olive drab. Don't forget to modulate, add chips and scratches, then filters and finally some pigments.

**3567, Civilians, Western Region, WWII Era (19)**  
is only the beginning when it comes to civilian figures from Master Box. They also offer an Eastern European set (3588) as well as their France, 1944 set (3578) that has a nun on a horse-drawn wagon and some civilian females. We had mixed feelings about this set of civilians. The guy with the rake is really nice figure overall, but the little boy's head is way too big! The bearded man has an option for wearing a Yamulka instead of a fedora. His coat needs some work. The little girl is just fine as long as you fix the gap in her neck. By the way, the little boy comes with a wagon that is not pictured, a nice touch. As usual, Master Box can be applauded for original thinking even when some of the figures may need a little extra attention.

Mig Productions

Mig Productions presents two tasty resin treats this time around. They are both from the U.S., but from different eras. 35-331, U.S. Navy SEAL Vol.

**2 (20)** could probably be used a Delta Force soldier too. He is sculpted to represent a special operations soldier from Iraq or Afghanistan between 2003 and 2005. The headgear he wears is a MICH (Modular Integrated Communications Helmet) TC2001 model with what we take to be an AN/ PVS 14 Night Vision Scope mounted on it. His armament is a SOPMOD (Special Operations Peculiar Modifications) M4 carbine. Although a lot of the web gear is molded on the figure, some if it such as the pistol holster and the canteen is separate.

The other figure, 35-334, Medic 82nd Airborne Division (21), is a lot simpler. You just attach the head. He wears the M1942 Parachute Jumpers Uniform that the 101st and 82nd airborne divisions wore before switching to regular infantry toggs for Market Garden in September 1944. Both figures were crisply molded with only a little flash to be removed on the SEAL figure.

**Miniman Factory**

Miniman Factory specializes in heavy hauling trucks, so it is no surprise that they release figures made to accessorize those subjects. Remember the female US driver from last issue? Well, she's got a date tonight with **F003, U.S. Soldier with Pallet Jack** (22). This guy is dressed out for the combat zone in the Desert Camouflage Uniform that saw widespread service until the introduction of the Army Combat Uniform. You could get also away painting this as the woodland camouflage BDU. He also wears Interceptor body armor and a hard hat. The pallet jack is a little tricky to assemble but it's a unique item and looks good overall.





F004, Soviet Guardian with Dog (23) looks to be a cold war era Soviet Border Guard judging from his hat and the rather mean looking German shepherd he comes with. He's perfect for snooping around the Miniman KrAZ loaded with smuggled Marlboros and Budweiser.

#### Resicast

Resicast sent us a new batch of figures lately that are mainly based on early war subjects. 35.5631, **Soldier in Great Coat, 1940** (24) is a British chap that wears the 1939 pattern double-breasted greatcoat. He is equipped with the good ol' M1937 web gear and a Lee-Enfield rifle. That thingy on his chest is the Mark IV respirator haversack. This figure comes with two heads, one with the overseas cap (pictured) and one with a helmet.

Judging from our references, 35.5631, **Belgian Soldier 1940** (25) is a pretty snappy rendition of your average Belgian infantryman from the 1940 period. The uniform is khaki-colored with brown leather web gear and black boots. The helmet is based on the French model and his rifle is a 7.65mm Mauser M1889. Both of these figures were crisply molded with very little flash and were a cinch to put together.

#### Royal

Royal knows that there is no such thing as having enough German tankers. 627, **German SS Panzerdivision "Leibstandarte Adolf Hitler,"** (26) is perfect for mounting on the front of an SS Panther. An interesting feature of this figure is that you can see the black tanker's trousers peeking out from underneath the cuffs of his one-piece camouflage coverall. Very sharp!

630, **Tank Commander "Grossdeutschland" Div.** (27) could probably fill the cupola of any Panzer quite well as he wears the classic black tanker's uniform we all know and love. The photo-etch brass headset band is a detail that is usually molded on.

631, **Panzer IV Crewman (Normandy 1944)** (28) is yet another variation of the panzer uniform. He wears the second pattern reed green denim jacket and trousers that were distinctive because of the big pockets. His left index finger was the victim of an air bubble.

On the civilian side of things, 636, **Mother with Her Childrens** (29) is a three-figure set. The little children are especially well done here. The teddy bear that the little boy holds is a reminiscent of the one that Jeff hides under his desk. Overall, the Royal figures were outstanding, but be careful with the hands as those individual fingers are especially fragile. By the way, a quick fix for missing fingers is a small bit of stretched sprue. Just glue on a bit of the appropriate width, trim to the appropriate length and then round off the fingertip with a few careful applications of liquid cement.

## Toro

Toro's Polish Army in Afghanistan figures have been pretty unique offerings so far. Each figure comes with a little foldout painting guide complete with full-color photos and decals for the insignia.

**35F33 Polish Army 2008 in Afghanistan Soldier with Grenade Launcher (30)** carries the Polish Beryl assault rifle with the Pallad 40mm grenade launcher slung underneath. This is just like the U.S. M16/M203 weapon. The detail on the Pantera Assault Vest for this stocky fella is pretty good too. There was some flash on this guy's weapon, but the rest was clean and easy.

**35F34 Polish Army 2008 in Afghanistan Resting Soldier (31)** is taking it easy. He also carries a Polish Beryl assault rifle. If you want to get a better look at the camouflage pattern for these uniforms, try the Polish Ministry of National Defense website at [www.mon.gov.pl](http://www.mon.gov.pl) (or Google the words Polish Uniform).

The last figure from Toro that we have is **35F38 Polish Army 2009 Female Crew Member of Leopard Tank (32)**. She is dressed in the green one-piece coverall and comes with a choice of heads; either with the beret or with the black tanker's crash helmet. She also comes with a foldout color guide and insignia decals. As mentioned in previous issues, Toro figures scale out a little big compared to some other 1:35 scale figures.

## Zvezda

Zvezda has taken a break from the WWII stuff to bring us this modern set. **3619, Soviet Paratroopers Afghanistan (33)** has six figures in it with a nice variety of equipment. You could probably also use these figures for modeling a scene from the war in Chechnya. The figures all wear the BZh-8T body armor. With the exception of the radio operator, they all wear Ssh68 helmets. The weapons include the AK-74, AK74 with grenade launcher, RPD light machine gun and Dragunov sniper rifle. Each figure comes with the assembly option of either using the weapon with the hands molded on or separate hands and weapons. We used the weapons with the hands molded on as they looked jim dandy and it left us with some extra small arms. The magazine pouches for the assault vests are molded separately too which makes assembly more complex but enhances detail. Overall, these figures were really nice for plastic, although some of the facial features were a little soft, especially on the sniper.



*The manufacturers submit all of the samples for Mini-Men and for this, we are very grateful. The exceptions this time are Master Box and Zvezda, which were submitted by Dragon USA.*

1/50 First Gear International TD-25 Dozer w/Ripper



# Die-Cast Weathering 101

Painting Guide Special: an intro to the world of refinishing prebuilt die-cast models

by Michael Rinaldi





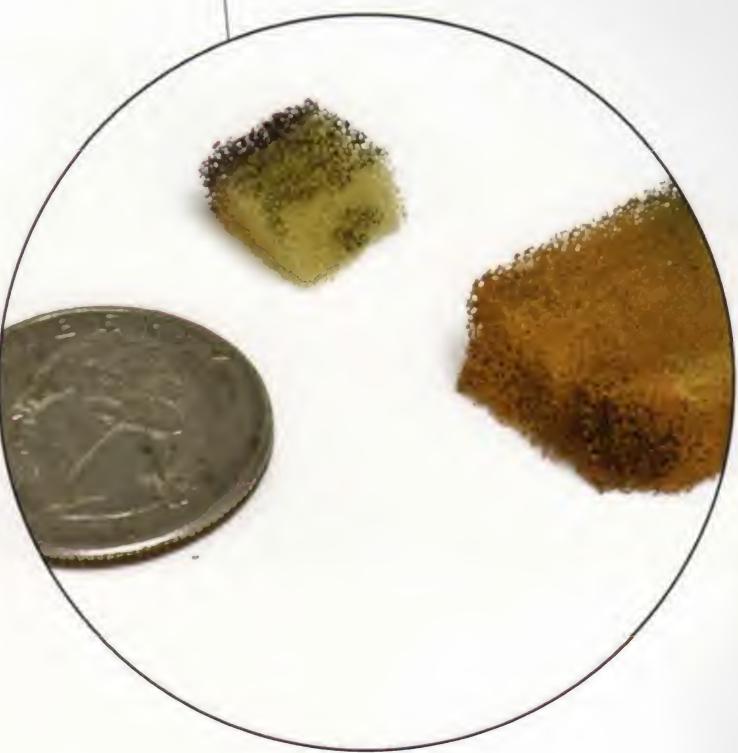
**W**hat is going here? Why are die-cast models being featured in MMiR? Well the truth is, there is a whole world out there that revolves around this subject and it has endless possibilities when you take a closer look. With today's modern tooling and casting technologies, the scope and execution of the detail present on these products is right up there with some of the best injected molded kits on the market. Only some of the finer details, like hand railings, tend to be over scale. There is also the occasional seam line, but by-and-large the majority of high-quality die-cast models are excellent products and ripe for some serious weathering and refinishing treatments. Not only that, but a few of them are in 1/34th scale, which makes them perfect tie-ins to your armor kits.

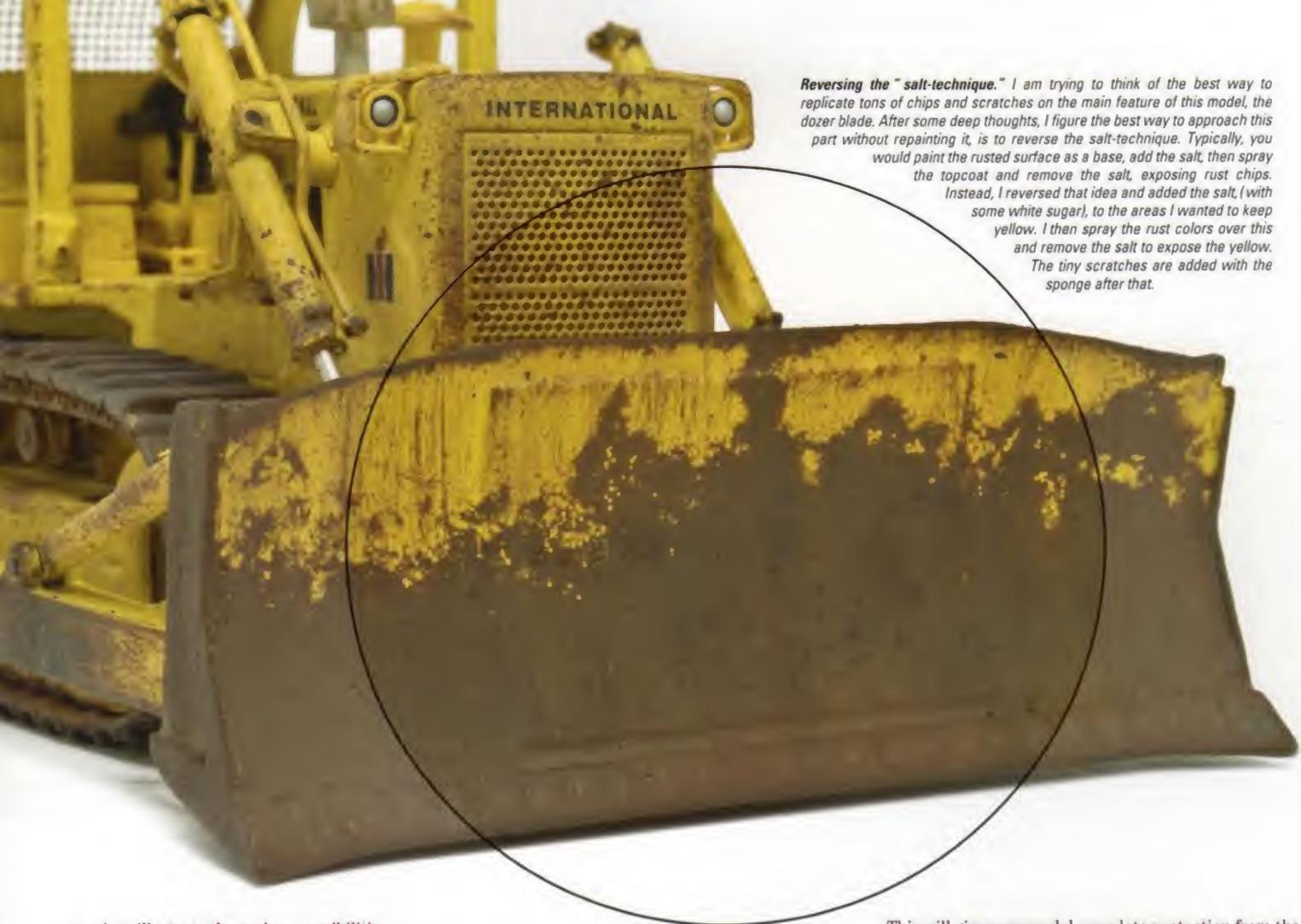
#### What are the possibilities?

When you get one of these oversized paper weights in your hands, the first impressions are usually "this thing is very heavy," and "this thing is frickin' cool!" I'm guessing many of you probably like big heavy machinery (seems like a common thread among modelers), so the thought of taking a large construction dozer and making it look properly used isn't going to be that foreign of an idea. I would even venture to guess many of you have actually had such thoughts when you see such models. If you already weather your military models to a high level, then the transition is quite natural really. The limit is only going to be your imagination and desire to see it beat up. Personally, for me the older and more heavily used, the better. I mean, if you are going to go through this trouble, then go for it. It is possible to go more extreme on the weathering than most military armor, and that is a bit like having a weight lifted from your shoulders—if you know what I mean.

There are a few scales in which these models are found. Fans of larger projects will like the 1/25 models, however these are usually quite expensive, but not overly so. The selection is pretty small overall. The primary scale for most construction related equipment is 1/50, at least as far as cool subjects and great products available are concerned. Prices depend on a few factors, mainly the size of the original piece, such as a crane. The bigger the thing is real life, the bigger the price tag of said model will be. Typically for 1/50 models, the detail is very well executed and prices are reasonable, so this makes 1/50 the ideal scale for this kind of project. 1/34 is another one, but this is mainly related to heavy trucks. There are not a lot of options for other vehicles in this scale, but what is there is typically high quality such as models by First Gear. For this article, I showcase a 1/50 dozer and 1/34 Mack dump truck, plus an odd scale 1/30 Dodge pick-up

Ninety percent of the finish is executed with small sponges just like those shown below. The technique is simple; take some Tamiya acrylic red brown and dark gray and dry-brush the chips and scratches on. The less paint on the sponge the better. The model is first given a coat of Testors Dullcote to prep the surface; nothing else was done to the model except the wear and tear. After a few hours, I get to this point shown here; just building the colors up slowly. Even the tracks are painted this way. However, the dozer blade is given special treatment, with salt and sugar no less.





*Reversing the "salt-technique." I am trying to think of the best way to replicate tons of chips and scratches on the main feature of this model, the dozer blade. After some deep thoughts, I figure the best way to approach this part without repainting it, is to reverse the salt-technique. Typically, you would paint the rusted surface as a base, add the salt, then spray the topcoat and remove the salt, exposing rust chips. Instead, I reversed that idea and added the salt (with some white sugar), to the areas I wanted to keep yellow. I then spray the rust colors over this and remove the salt to expose the yellow. The tiny scratches are added with the sponge after that.*

truck to illustrate the various possibilities.

How you go about executing your ideas is really where the thought lies. Physically, accomplishing it is easy and no different than a plastic model. The first thing to get rid of is the high-gloss sheen present on every die-cast model. This is what makes them look so toy-like. This is easily dealt with. Into this conversation steps the trusty original Testors' All-Purpose Dullcote, a clear flat lacquer spray that covers anything. It is the perfect tool for this job, and for models like this dozer here, two lightly sprayed layers does the job perfectly.

Once flat coated, you can pretty much treat a die-cast model just like any other with a basecoat paint job. If you are a user of enamel products for your weathering, then I suggest an acrylic flat varnish (such as Vallejo) on top of this.

This will give your model complete protection from the rough treatment it is about to receive.

#### Pick your direction

After the model is flat coated, the next step is to figure how you want it to look. Obviously, looking at photo reference is the best way to get started. Thankfully, there is a ton of it out there and it is largely free, if you have an internet connection. For construction equipment, there is simply no shortage of great photos and the two best sources are Google images and flicker websites. Type in any relevant search words like "dozer" or "abandoned truck" and—viola! Actually, there are usually so many hits it takes a lot of time to sift through them all to find the ones



you really like. After that, gather a few on your hard drive for future reference and grab a few items in preparation for the weathering.

Now depending on the end result desired, you'll need a couple of items to apply the marks with. As seen in the photos on the first page, small sections of an electronic packing sponge are used as the primary painting tool. I tend to stay away from scouring pads for the smaller scales, but have a few on hand just in case. Fine tip round brushes are also useful for touch-up work or hard to reach areas, and for the paint: keep it simple. Dark red browns and grays are best, such as Tamiya acrylic XF-64, Red Brown and XF-24, Dark Grey, which are used to replicate rust and bare metal, respectively. I also like to have a couple of paper towels ready to absorb the extra paint from the sponges before applying them to the model's surface.

Those are the main tools for a simple weathering job like this dozer. A couple of notations; it is possible to use whatever your standard products are for washes, pigments and filters, so I will assume these are on your bench, as well.

### Executing that direction

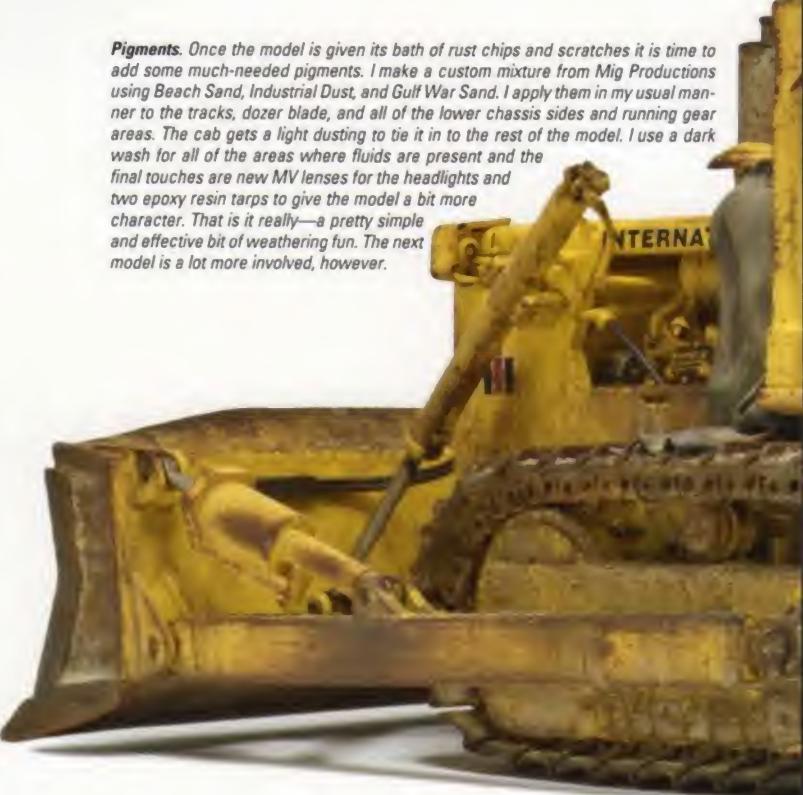
With your reference in hand and the tools at the ready, there is nothing left to do but attack the model. On this dozer, I actually start with the front blade and use a reverse of the salt-technique which I detail in the caption on the previous page. I figure if I start here and mess it up, I have room to fix things without losing the model. Remember this is a first-time experiment, and that comes with certain risks associated with that. But things work out well and as you can see I am able to achieve a strong finish to this area.

The rest of the model is treated to sponge dry brushing. Using a few different sized sponges, I dip the sponge in the red brown, dab most of it off on the paper towel and then very gently dry brush the sides, edges, corners, etc. The direction of the dry brushing is very important and I try to make the marks flow along the lines of travel, at least in theory. I also use a stippling motion to apply static spots and/or chips of rust on items like the exhaust pipe and the center of the flat panels.

### So what about larger projects?

Invariably, there are also many larger vehicles that can be enhanced in such a manner. Here I have a 1/34-scale modern-era Mack Granite dump truck

**Pigments.** Once the model is given its bath of rust chips and scratches it is time to add some much-needed pigments. I make a custom mixture from Mig Productions using Beach Sand, Industrial Dust, and Gulf War Sand. I apply them in my usual manner to the tracks, dozer blade, and all of the lower chassis sides and running gear areas. The cab gets a light dusting to tie it in to the rest of the model. I use a dark wash for all of the areas where fluids are present and the final touches are new MV lenses for the headlights and two epoxy resin tarps to give the model a bit more character. That is it really—a pretty simple and effective bit of weathering fun. The next model is a lot more involved, however.



**Graphite.** The edges of the blade and ripper teeth are treated with graphite. This is another simple, yet very effective medium for recreating metallic surfaces.



**Pigments, continued.** The heavier applications of pigments are achieved by placing large piles of pigments on the upper surfaces, and then using capillary action, touching the edges with a brush filled with Pigment Fixer from Mig Productions. The pigments soak it up and once dry, look as seen here.



for use as a suitable example. It's nearly identical in scale to a 1/35 scale model, and that means all of the same weathering principles and processes are applicable here. I am not to the point of wanting to completely repaint the model, but I do want to completely weather it as if it has been in use for a number of years.

Like the bulldozer, and any other project for that matter, it all starts in the research phase. I spend a lot of time perusing the many Internet photo sites like flicker and also those that specialize in die-cast collectibles to get a sense of reality and what the guys do that are into this. I can tell you there is nothing like researching vehicles that have plenty of pictures and information on.

How many times have you gone looking for an obscure vehicle photo and spent hours and hours in an effort to find the magic "perfect" photo. What a relief it is to have access to almost unlimited reference photos, most of which are in color.

But I digress—basically I picked a handful of quality photos that fit the look I was after and then plan out the work ahead.

I start with a flat coat, same as the dozer. Well, in truth I actually start by breaking down the model into its main subassemblies. I recognize immediately that in order to get the best out of the finish on a model like this one, it is going to require a full breakdown. On the dozer, I think I got lucky because most of the model is the same color and the areas that need attention are all exposed, so it simply does not require that effort. But this truck is different, I need to get in and around the frame, engine compartment, interior of the cab, under the rear dump bed and all around the suspension and running gear. The process is not as hard as it looks. These models are primarily assembled with screws and a little super glue. It takes about an hour or so to disassemble one. On this model, there are



**Headlights.** For a much-improved look, I drill out the plastic headlights and insert an MV lens (or similar product from Resicast, for example). This took all of five minutes and made a huge difference.

1/34 First Gear Mack Granite Dump Truck  
"Joseph M. Sanzari, Inc." (limited edition)



three main screws underneath that hold the bed and rear axles together, and two under the engine block. The rest is basically pried apart—carefully, of course, to complete the breakdown.

Once I have this accomplished, I then flat coat everything. Fundamentally, at this point you have a model in a base coat of colors and flat varnish for protection and elimination of the high gloss sheen. With that in mind, I set about to weather it just as I would any other armor model.

I start weathering by applying a lot of pigments to all of the lower areas—chassis, axles and springs, main frame, and under the engine bay. I follow this with some heavy washes in dark brown and black for replicating grease, grime and oil. Mixed with the pigments, the resulting look is very convincing. I don't worry, the more imperfect looking the better. The engine itself is also given liberal amounts of all the above to give it that well-used look. I even weather under the hood. Two tiny screws attach it to the radiator frame, so it is easy to remove and work on.

Overall, the process and the order in which I weather the subassemblies, is coordinated so I can reassemble the truck without causing damage to the work completed at that stage. It is important to remember that this requires some form of handling to reassemble the model and I need to constantly be aware of this. The model is also quite heavy and bulky, being almost entirely made of metal, so it will require forethought to work through properly.

With that said, I continue to work my way around the model, having started with the lower areas then moved my way up. The chassis and running gear are

reassembled, the engine is finished and put back together; then the interior of the cab is given a very light dusting with pigments, and the windshield is reinserted and the main cab screwed back in place. So that just leaves the dump bed.

The nice thing is that it comes completely off of the truck, but because it is half the weight of the model and has a ton of surface area to contend with, it takes almost as much time to weather the bed as the rest of the model, but because this is a dump truck, the bed must be weathered properly!

After looking at my reference photos, I want to fade the paint a little bit, so I very lightly sprayed some of the same mixture that I use on the tires and added some panel fading and streaks down the sides, both inside and out. I don't even bother to mask off the light on top since I want it to look dusty as well. I follow that with a series of special effects; paint chips, pigments, pin washes, washes and wet pigments flicked against the sides. This has become the usual order of techniques, so I don't want to sound too much like a broken record. The key though, is the quantity of work applied for each step. I make my models look different by varying the opacity of each process from one model to the next. Beyond that, I work my way through this model and the final look is seen in the photos here. It is definitely worth it to bring out all of the detail present in this model, it has much tighter detail than I originally thought—all previously hiding under that high-gloss varnish coat from the factory.

**Getting dirty.** Can you think of any other way to have more fun with a model (the scale model kind, of course)? What you see here is the simple buildup of pigments with some washes and stains added (described in more detail below). The process is easy and effective.



**Chassis weathering.** This model is the perfect candidate for adding a lot of dirt and stains to all of the lower chassis areas. Black is such a great color because almost any color of dirt will look awesome once applied. Using many of the same techniques as my armor models, I attack the lower chassis to really get it looking dirty. I start by laying down a lot of dry pigments and then fix them in place with Mig Productions Pigment Fixer. I love this product because it makes the pigments stick very well and they remain quite durable when dry. They do not stand up to fingerprints, but are strong enough not fall or blow off if the model is handled roughly. I keep repeating this process until I like the look. After that is done, I add a lot of dirty dark brown washes and stains, concentrating on all of the joints of the suspension and wheel centers.





**Where the rubber meets the road.** Any time you are building a wheeled vehicle, painting the rubber is one of the top priorities for achieving a successful model. It is also one of the most overlooked aspects, and if you have spent any amount of time looking at the sidewalls on construction trucks you know they get messed up pretty quick. So how do we treat the vinyl rubber tires found on die-cast models? There are a couple of ways, but the one I use here I really like for this type of work. The tires are pulled off of the rims first (a bit tough to do, but possible), and then I spray the

sidewalls with a very thin mixture of Tamiya XF-55, Deck Tan and XF-57, Buff. This discoloration is applied with my airbrush and is very quick and random. I add some streaks from the center out as well. Then I take a brush dipped in lacquer thinner—I wipe 99% off on a paper towel, so the brush is nearly dry—then using quick strokes “dry-brush” the tire and in the process, the thinner removes the paint revealing the darker rubber underneath. I recommend practicing this first, but it is a great method for this style of finish and worth learning.

**Under the hood.** If you hate a dirty motor, look away now. I think to convey as much use as possible, it is necessary to get messy in the engine bay. This is the most difficult part of disassembly because most of the pieces are glued together and that requires some calm nerves to break parts off to work on the areas underneath. All of the piping needs to come out, as well as the engine block and radiator, but once removed, it is all easy to make look “good.” The same principles that apply to the exterior, apply here too. I start with a light dusting of pigments, sealed with some fixer, and then washes are added to illustrate oil and grease build-up—nothing too specific, just enough work to get the point across. Then the pieces go back in place, I add a drop of CA glue where necessary, and then I weather them up the same way. Once the area is complete, I reattach the hood (which was already weathered separately), and the results are as you see here.





**Getting down to the dirty details.** There is actually a lot of action going on in this photo. I have all of the weathering for the wheels and tires, the lower chassis and a close up the work done on the bed. Shown are the layers of special effects added to arrive at the end result. For the bed itself, it begins with some faded paint. From there, I add the paint chips, which against the red base coat, visually blend in nicely. For the paint chips, I use a small piece of sponge (the same one as shown with the dozer photos), to apply a light orange color as the base layer. Then, I take a very thin pointed round brush and paint the center of each chip with a dark gray-brown color to represent the

bare metal. Clearly seen are the layered chips on the end of the bed and note how I use the sponge to show the direction of travel of the chips. After the chips, I add the pigments. In this instance, I just want a light dusting, so I apply them by dry scrubbing them in during the process. I blow the excess off and to seal them, I spray the Pigment Fixer from my airbrush. I repeat this process a few times until I get the opacity of dust seen above. Then I apply a light pin wash to the corners, details, joints, etc. to help bring out the details. I finish it off with some flicks of wet pigments and an oil wash to represent splattered mud and similar effects.



**Putting it all together.** Models like this one can take on a life of their own. At first, I am unsure if I even want to mess with this thing. It is big and requires effort to prep in order to get to the fun of weathering it. Plus, I am unsure how it will turn out, never having attempted something like this before. It was an experiment in this regard. Happily, things work out OK, and enough goes right that I feel it worth sharing. If you have a solid understanding of weathering processes and techniques, then by all means pick one up cheap on eBay. Have some fun with and see where it takes you. I think there is a lot of crossover appeal between weathering one of these models and military vehicles. The methods are very similar and if you have a lot of the appropriate products already, then you don't need to buy anything else to execute this idea other than the model itself.

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